

## INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

Story of the Week  
Add Texas Stories  
Gags of the Week  
Another HCL Yarn  
Radlrudrad  
Good News!  
Quote of the Week

### Story of the Week

"Gimme a dime for a cuppa coffee, and hurry it up, pal."  
"What's all the rush?"  
"I'm double parked."

### Add Texas Stories

Into a New York night club barged a tall Texan. On his way to the bar he stumbled over two prone gentlemen.

"Give me," he ordered, pointing toward the prostrate bodies, "a double shot of what they had."

"I'd rather be in Hell than in Texas," General Phil Sheridan oathed. To which a Texan editor retorted: "Every man should be loyal to the place where he belongs."

In some parts of Texas, we've been told, trees follow dogs.

### Gags of the Week

A person completely wrapped up in himself makes a small package.—**REV. HARRY EMERSON FOSDICK.**

The only trouble with all these new-fangled devices so simple that a child can operate them is that the children usually do.—**Ankeny Times.**

According to James Webb, of a certain preacher it was quipped:

"Six days of the week he is invisible, and on the seventh day, incomprehensible."

It doesn't matter how much money you have. Everyone has to buy wisdom on the installment plan.—**Grit.**

The world is made up of isotrons, electrons, protons, neutrons, and morons.—**Kossuth Advance.**

### Another HCL Yarn

The boss went into conference with his office manager about which young man he should advance.

"I think, sir, that is something for you to decide."

"I want your opinion," snapped the Boss. The Office Manager replied: "Of the four, I would choose Joel."

"He has a nice personality," the Boss nodded. "And he is very obliging. Last fall he heard me moaning about not being able to get any tickets to the Michigan State football game and let me have his—I insisted on paying for them of course."

"That's just like him," smiled the Office Manager. "Whenever it rains, he drives me home from work, and he has to go 'way out of his way to do it."

"Early last November," the Boss recalled, "I met him and his wife outside a movie. She's a cute little trick. It was just before election and I found out he's a sound man, politically."

"Will it be Joel, then?" asked the Office Manager. "Yes," agreed the Boss.

The Office Manager was almost at the door when the Boss cleared his throat and inquired: "Er, Joel does his work all right, doesn't he?"

### Radlrudrad

Herewith some important intelligence from abroad:

Among the Hottentots (Hottentoten) the kangaroos (Beutelratte) are found in large numbers. Many of them wander over the country free and unmolested; others less fortunate are taken by hunters, put into cages (Concluded on Page 6, Column 1)

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THE NEWSPAPER

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## Pickup In Freezer Sales Predicted For This Year

CHICAGO—Industry executives concerned with the manufacture and sale of home freezers believe that they have some indications that sales of home freezers may show an upward trend in 1954.

This feeling is based on three things: 1) the fairly enthusiastic reception that retailers have given to new freezer lines; 2) reports indicating that there is a very recent pickup in sales at the retail level; 3) the thought that if there is to be a "tightening of the belt" generally throughout the country, people will be looking for a way to shave day-to-day expenses, and the freezer affords that opportunity.

The pickup in retail sales was related during the Winter Market here in terms of the report of a Tampa, Fla. food plan tied in with a prominent retail appliance operation that moved some 90 freezers in December, of a Chicago department store that sold 19 freezers off of its floor in December, and of a dealer in a Wisconsin town of 1,500 population that moved three 25-cu. ft. upright freezers with a food plan in December.

George Foerstner, executive vice president of Amana Refrigeration, Inc., which lays claim to being the largest single manufacturer of home (Concluded on Back Page, Column 3)

### Bulletin

## Nash-Kelvinator, Hudson Merge As American Motors

DETROIT—Consolidation of Nash-Kelvinator Corp. and Hudson Motor Car Co. was approved today (Jan. 14) by directors of the two companies, subject to stockholders' approval.

The new combination is to be known as American Motors Corp. It will be the fourth largest in the automobile industry.

The announcement was made jointly by A. E. Barit, president and general manager of Hudson, and George W. Mason, chairman and president of Nash-Kelvinator.

Under the plan, Nash, Hudson, and Kelvinator will operate as separate divisions of American Motors. Dealer and sales organizations will retain their separate identities.

Present Kelvinator policies and programs will continue, Mason said.

## Hoppin Heads Advertising For G-E Air Conditioning

BLOOMFIELD, N. J.—Philip B. Hoppin has been appointed manager of advertising and sales promotion for the General Electric Co. Air Conditioning Div., according to J. S. Beldon, division manager of marketing.

Hoppin has been associated with General Electric since 1950. Prior to his new appointment, he was supervisor of advertising and sales promotion for the Air Conditioning Div.'s home heating and cooking and commercial products departments.

He is a graduate of Harvard college, Class of 1933, and the Harvard business School, '35.

He has had wide advertising and sales promotion experience with several other manufacturers.



P. B. Hoppin

## Home Air Conditioning To Get Attention at ASHVE Texas Meeting

HOUSTON, Texas—Attendance of some 1,200 is expected for the 60th annual meeting of the American Society of Heating and Ventilating Engineers to be held at the Rice hotel here Jan. 25-27.

Two of the 13 papers which have been scheduled for presentation at the four technical sessions of the meeting are devoted to residential air conditioning.

"Room Air Distribution Research for Year-Round Air Conditioning—Part II, Supply Outlets at Three Floor Locations" will be discussed by H. E. Straub and S. F. Gilman of the University of Illinois.

"Cooling a Small Residence Using a Perimeter-Loop Duct System" will be presented by D. R. Bahnfleth, C. F. Chen, and H. T. Gilkey, also of the university.

Other papers planned for the three-day meeting cover a variety of topics, including heat pump operating costs, automobile air conditioning, cooling (Concluded on Page 4, Column 3)

## RCA Room Coolers Have New Features And Lower Prices

CAMDEN, N. J.—A greatly expanded line of RCA room air conditioners, incorporating many new engineering features, was unveiled by RCA Victor distributors recently in a series of dealer meetings in all parts of the country.

Average retail prices are substantially lower than last year, it was reported by W. F. Carolan, general sales manager of the RCA Victor room air conditioner department.

He said reductions on some models are as much as \$40. Starting at \$229.50 for the ½-ton window model, prices range to \$899.50 for the 1½-ton console in lined oak finish.

The new line consists of nine basic models of both console and window type. The merchandise is designed to meet 1954 market conditions which were described by Carolan as having two outstanding characteristics: (1) wider consumer acceptance of room air conditioning, and (2) stronger competition in the field than ever before.

New engineering features in the RCA models, according to Carolan, include permanent filters, night lights, (Concluded on Page 29, Column 1)

## Victor Introduces Casement Room Cooler, Freezers

HAGERSTOWN, Md.—A room air conditioner for casement-type windows that can be installed in a few minutes time, and upright home freezer models that feature foot-pedal door operation, are among the new products being introduced for 1954 by Victor Products Corp. here.

The room air conditioner, a ½-hp. model, is designed for mounting on the metal frame of a casement window, and is mounted entirely from the inside in the same way a screen is installed.

It is designed to fit a standard 3-light opening 16½ in. to 16¾ in. wide and 35½ to 35¾ in. high. The Bonderized steel cabinet is finished in pastel grey baked enamel. The interior cabinet is removable without dismantling the unit from the window.

Other features include 3-dimensional air grille permitting enveloping the conditioned air to all sections of the room, two-speed fan operation, adjustable damper to control the amount of fresh air entering room or air exhausted from room, 6 push-button control operation, and "engineered quietness." Adjustable thermostat for temperature control is available as optional equipment.

The new Victor "Pedal-Dor" upright home freezers featuring the (Concluded on Page 4, Column 5)

## New Line of Servel Conditioners Reflects 'Packaged' Trend

EVANSVILLE, Ind.—Servel, Inc.'s new 1954 line of air conditioning equipment, reflecting what the company calls a "growing trend toward packaged equipment" is currently being introduced to distributors in sales meetings around the country.

First shown at the Hotel Roosevelt in New York City on Jan. 13, the line was later presented to distributors in Chicago, Atlanta, Dallas, Houston, and Los Angeles.

Featured in the line are three electrically operated self-contained packaged units with cooling capacities of 3, 5, and 7½ tons; a gas-operated 2-ton cooler for use with existing forced-air gas furnaces; and casement-type, reverse cycle, and flush-type room units.

With the addition of the electrically (Concluded on Page 2, Column 4)

### Off the Drawing Board

## Frigidaire 'Dream Kitchen' Includes New Concepts of Food Preparation

DAYTON—Creation of an experimental "Kitchen of Tomorrow," featuring advanced concepts of convenience and comfort for the homemaker, has been announced by General Motors and its Frigidaire Div.

The kitchen, designed by the GM styling section with the cooperation of Frigidaire engineers and home economists, will be shown publicly for the first time at the spectacular "GM Motorama" show which opens Jan. 21 at the Waldorf Astoria hotel in New York City.

It is a functioning kitchen.

Harley J. Earl, GM vice president in charge of styling, explained that the "dream" kitchen actually was built to serve somewhat as a laboratory for practical testing of both

mechanical and styling ideas that GM designers and Frigidaire engineers have sketched on drawing boards and discussed in engineering shop-talk.

The kitchen is free-standing and modular in construction, with clean, functional lines. It was planned with full recognition of new methods of preserving and preparing foods, of homemakers' dislike of stooping and stretching, and of the growing trend toward the "open kitchen" which calls for merging the kitchen with living and dining areas.

Wall cabinets glide down within easy reach almost at "a wave of the hand." It is not necessary to touch a pushbutton, the mere proximity of (Concluded on Back Page, Column 1)

## NARDA May Ask Action on 'Discount' Ads

Speakers Hit 'Deceitful' Copy, Suggest 'Policing,' Stress Longer Store Hours

CHICAGO — The record-breaking number of retailers—estimated at well over 400—who turned out for the annual convention of the National Appliance & Radio-TV Dealers Association were urged, among other things, to intensify their sales efforts in 1954 and to speak out against the "deceitful" advertising of price-cutters.

During the three-day convention, held last week at the Conrad Hilton hotel here, Vergal Bourland of Vergal Bourland Home Appliances, Fort Worth, Texas, was elected president. Chosen as a vice president last year, he succeeds Wallace Johnston of Wallace Johnston Appliances, Inc., Memphis.

Mort Farr of Upper Darby, Pa., was one of the speakers who advised dealers to plan more concentrated sales programs. Speaking during a session on selling, the former NARDA president reported results of a survey of dealers to point up this need.

Farr said the survey showed that less than 6% of the dealers answering a questionnaire stayed open six nights a week. Fifty-four per cent were open only one night a week. Noting that 50% of married women have jobs outside the home, he said it would be better for a dealer to shut his store in the mornings and stay open nights than to sharply limit night openings.

At a luncheon session, J. A. Broadhurst of Jenkins Music Co., Wichita, Kans., bitterly attacked "unethical" advertising in which dealers offer "ridiculous" trade-in allowances and "free" gifts and services of every description.

After citing examples of such advertising, Broadhurst declared: "Advertising feeds and gives life to business. If we poison it, we eventually destroy the industry at all levels."

"The character, ethics, and in- (Concluded on Page 29, Column 2)

## Lipman Introduces New Ice Maker; Expanded Ad, Sales Plans Presented

BELOIT, Wis.—Marked by the introduction of the new model LC-40 ice cube maker, Lipman Refrigeration Div. of Yates-American Machine Co. held its annual sales meeting at its home office here this month, presenting expanded product, sales, and advertising programs for the current year to all of its sales representatives.

To give its salesmen better understanding of modern air conditioning and refrigeration practices, a series of discussions were led by company engineers and technicians. A seminar covering advertising and sales promotion was directed by Ralph Timmons, head of the firm's advertising agency; and details of the new (Concluded on Page 4, Column 1)

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## 'Dual-Duct' System In City-County Bldg. Gives New Twist to Good Basic Design

DETROIT — Discussion of the "Dual-Duct" system selected for year-round air conditioning of Detroit's new City-County Bldg. was presented by J. W. Kreuttner, vice president of Buensod-Stacey, Inc., before the third annual joint meeting of the Detroit ASRE section and the Michigan ASHVE chapter here recently.

It was first pointed out by Kreuttner that the architects for the building, which consists of a 21-story section and a 14-story section, had set up the following 11 requirements for the air conditioning system:

- "Economical in first cost;
- "Treat all areas, inside and outside, in one system;
- "Cool or heat any area at all times without summer-winter switchover;
- "Supply heating and cooling through one medium;
- "Be free of odor, bacteria, mold, and dirt accumulation;
- "Be flexible, easily controlled, easily zoned and rezoned;
- "Require no extraordinary maintenance and operation cost;
- "Work equally well with or without a direct radiation system;
- "Be quiet in operation;
- "Provide adequate ventilation and air movement without drafts;
- "Provide constant volume in all zones at all times."

Two additional requirements, which Kreuttner said a system ought to meet, are:

- "Be equally adaptable to both new and existing buildings, and

"Be adaptable to special applications such as hospitals, laboratories, processes."

The Dual-Duct system for the building involves 3,000 under-window air mixing and distributing units and two 960-ton centrifugal refrigeration machines supplying chilled water to the heat exchangers. Latter are located on roof of each section, there being four fans for the 14-story courts section and five fans for the 21-story office section, the fifth being intended chiefly for the auditorium.

Two central shafts in each building contain the main cold air, warm air, and recirculated air ducts leading to the 3,000 individual mixing units.

The centrifugal machines, which are located in the basement, supply 4,190 g.p.m. in the 52° to 41° cooling range, using 5,800 g.p.m. of 75° water for condensing. This is raw water piped directly from, and returned to, the Detroit river about two blocks away from the building.

"Supplying air through two ducts is not new," Kreuttner pointed out. "The thing we have done is to utilize the good basic idea and give it new twists to make it more efficient."

"The system is the important thing—the arrangement of the apparatus, that is. This is not a high pressure system although it can operate at any pressure. Pressure here is merely an economic question. You have to balance the operating cost against

the cost of the building," he emphasized.

"The Dual-Duct system," he also declared, "supplies more primary air than those types of systems which depend on inducing air movement within the space."

In this system, Kreuttner explained, there are two conduits or ducts, one carrying warm air; the other cold air. The mixing unit proportions the amount of cold to warm air admitted to the space in response to a thermostatic control in the space. There is one thermostat for every four mixing units.

Air at 50° is supplied through the cooling ducts while air in the heating supply ducts varies between 85° and 135°, depending on outdoor temperatures.

An important aspect of this system, Kreuttner added, was that the fans and air system operate on a constant capacity basis.

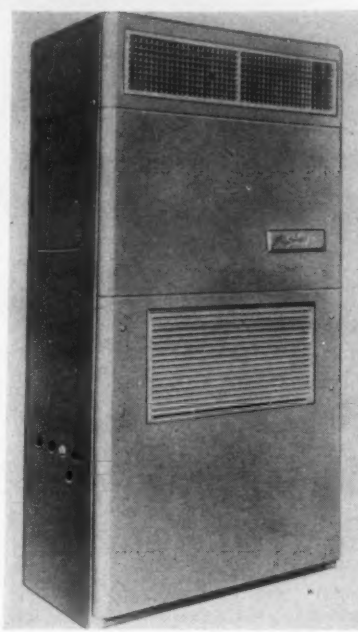
"Dampers can force all the air through one duct or the other, and a volume control is provided in the mixing chambers to compensate for variations in pressure."

Maintenance on the mixing units, he said, is limited to the mixing damper and the volume regulator.

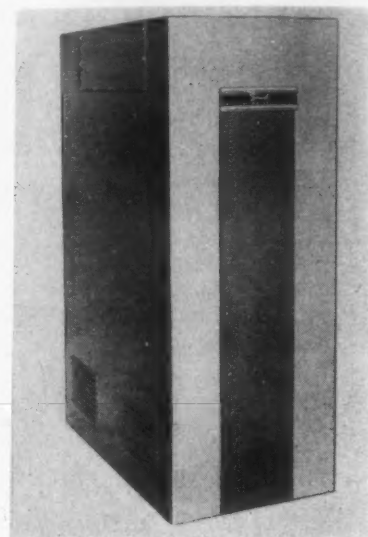
Although this Dual-Duct installation is going into a new building, the big market for air conditioning, according to Kreuttner, is in existing buildings.

"It makes no difference with this system whether direct radiation heating is already present. You don't have to tear this system out, but instead you can extend its life by using both systems."

"The vertical shafts needed to deliver air to the mixing units can be run down without disturbing present tenants," he said.



NEW 3-ton Servel electric air conditioner, model 130E, requires less than 6 sq. ft. of floor space.



NEWEST ADDITION to the Servel air conditioning line is a direct-fired 2-ton gas-operated cooling unit that can be connected to forced-air gas furnaces to provide all-season comfort.

## Servel A.C. Lines--

(Concluded from Page 1)

operated packaged units, Servel claims to have the first line to include models that operate on electricity, gas, fuel oil, or steam.

The electrically operated units, refrigerated by Servel electric compressors, are designed for commercial use but can be adapted to connect with existing residential warm air furnaces, the company said.

The electric units are divided into three component parts, the plenum section, cooling section, and compressor section.

### AIR DEFLECTED 2 WAYS

Located at the top of the unit, the plenum has adjustable grilles to deflect the air both vertically and horizontally. It houses optional hot water or steam coils when heating is desired. This section can be omitted when a remote installation is made. Duct connections are then made direct to the blower outlet of the cooling section.

The cooling section contains the fluted-fin cooling coil made from seamless copper tube, a centrifugal blower with blades curved forward to provide maximum air movement with low fan speeds, and filters. The controls, concealed under a hinged nameplate, include a 3-position rotary switch (off, ventilation only, and ventilation and cooling) and a manual temperature control.

The compressor section houses the semi-hermetically sealed, direct-drive Servel motor compressor.

The 3-hp. model 130E has a refrigeration capacity of 36,000 B.t.u./hr. with a 1,200 c.f.m. blower. Heating coil capacity ranges from 51,800 to 90,200 B.t.u./hr. on steam and 59,500 to 78,900 B.t.u./hr. on hot water. The unit measures 75 in. high, 38 in. wide, and 20½ in. deep.

The 5-hp. model 150E has a cooling capacity of 60,000 B.t.u./hr. and heating capacities of 82,500 to 144,500 B.t.u./hr. on steam and 91,800 to 122,200 B.t.u./hr. on hot water. Blower fan is rated at 2,000 c.f.m. Over-all dimensions are 83 in. high, 44½ in. wide, and 22½ in. deep.

The 7½-hp. model 175E has a cooling capacity of 90,000 B.t.u./hr. and heating capacities of 126,700 to 220,000 B.t.u./hr. on steam and 127,300 to 180,000 B.t.u./hr. on hot water. Blower fan is rated at 3,000 c.f.m. Over-all dimensions are 92 in. high, 48½ in. wide, and 26½ in. deep.

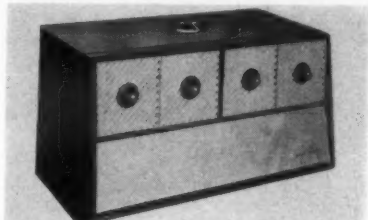
Servel says that its new 2-ton gas unit is designed to meet the needs of most average homes, offices, and small business places. It requires only 8.7 sq. ft. of floor space and can go through a 30-in. door.

### GAS UNIT FOR HOMES, OFFICES

The refrigeration system in the cooling unit is the same absorption type that is used in Servel gas refrigerators and Servel "all-year" gas air conditioners. A gas flame produces the cooling effect without motor or moving parts.

H. R. Nielsen, sales manager of the air conditioning division of Servel, pointed out that nearly 6,000,000 American homes are equipped with gas furnaces, providing a good market for the new cooling unit.

Among the new window-type room coolers, the casement-type units are said to be compact enough to fit 197



SERVEL WONDERAIR room air conditioner has front panel of "driftwood." Unit for standard window is made in ¼-hp. models.

different types and sizes of casement windows and other small special-type windows. They have no exposed controls. Instead, they operate by pulling out the front—like a drawer—to one of three different positions. They are made in ¼ and ½-hp. sizes.

The reverse-cycle units are standard width and designed to produce both heating and cooling. They are made in ¼ and 1-hp. sizes and feature a "driftwood" panel on the front.

The flush-type unit is a ¾-hp. model that will sell at a special price. Its unique design, according to Nielsen, permits it to be installed with only 5 in. of the cabinet extending into the room.

Servel's line for 1954 will continue to include 2, 3, and 5-ton "all year" air conditioners operating on gas, oil, or steam; a 25-ton steam operated water chiller that provides low temperature water for heavy-duty comfort cooling or industrial processing; and water-conserving cooling towers for the 3-ton and 5-ton models.

## Tyler To Show New Line to Sales Group Jan. 28-30

NILES, Mich.—Four hundred Tyler agents from all over the United States and foreign countries will attend a three-day Tyler international sales meeting at South Bend, Ind., Jan. 28-30 inclusive, according to Robert L. Tyler, president, Tyler Refrigeration Corp. here.

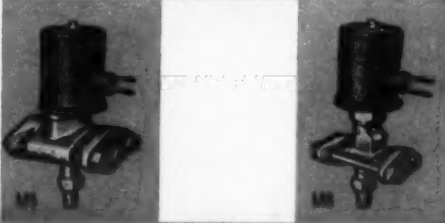
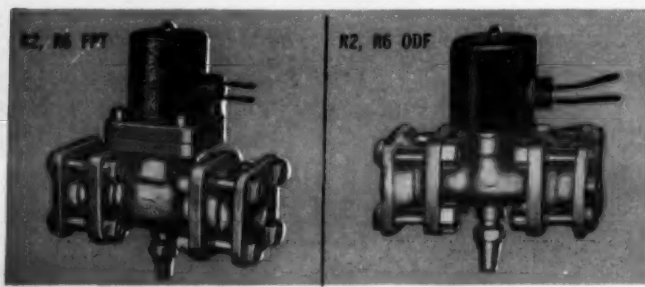
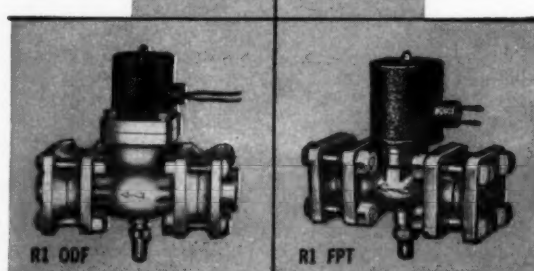
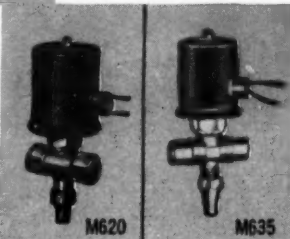
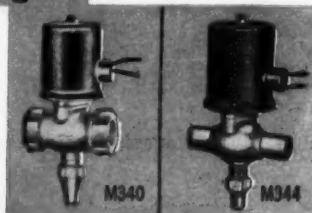
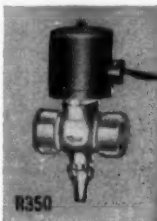
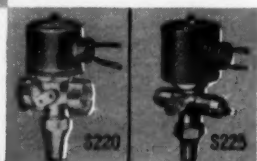
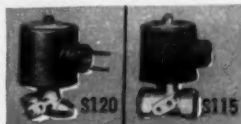
This largest gathering of the Tyler sales organization since the war will mark the beginning of the second 25 years of Tyler progress, and will feature the unveiling of a new and revolutionary line of Tyler self-service refrigerated cases, Tyler further explained.

Announcement to the trade, of the new Tyler line, is scheduled for February, Tyler added.

## Dexter Stockholders OK Purchase by Philco Corp.

PHILADELPHIA — Philco Corp. announced recently that the sale of the assets of the Dexter Co., Fairfield, Iowa, manufacturer of home laundry equipment, to Philco has been overwhelmingly approved by Dexter stockholders. It is planned to complete the transaction by Feb. 10 or shortly before.

Philco will continue operation of the Dexter Co. under its present management, of which Tom B. Hunt is president. Its output of washers and dryers will be marketed under the Dexter name. Entry into the home laundry field rounds out the Philco program of major appliances which already includes television, radios, refrigerators, freezers, air conditioners, and electric ranges.



**ALCO**  
SOLENOID  
VALVES

## the complete line

- for Freon-12, Freon-22, Methyl Chloride and Ammonia
- for liquid line, suction line or hot gas discharge service.
- for brine, water, steam, air, oil
- for all types of electric current
- for wide range of connections: ½" to 2½" solder, ¾" to 2" pipe thread
- for use with thermostats, float switches, timers, and many other control devices

Special valves for special applications are available.

Our Bulletins 173 and 182 give complete technical information. Send for your free copies today.

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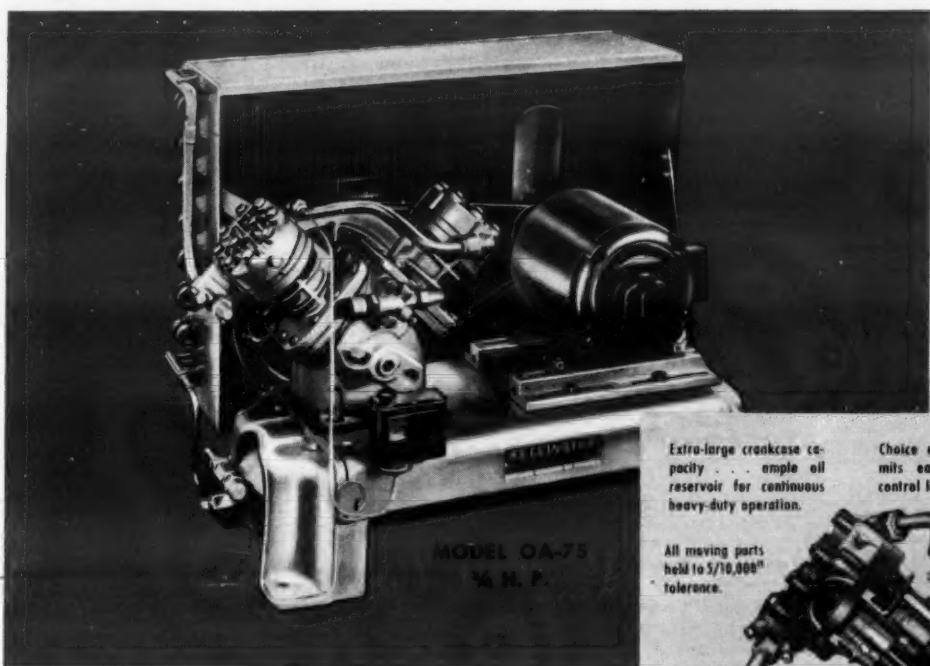


Even More Sizes Now Available!

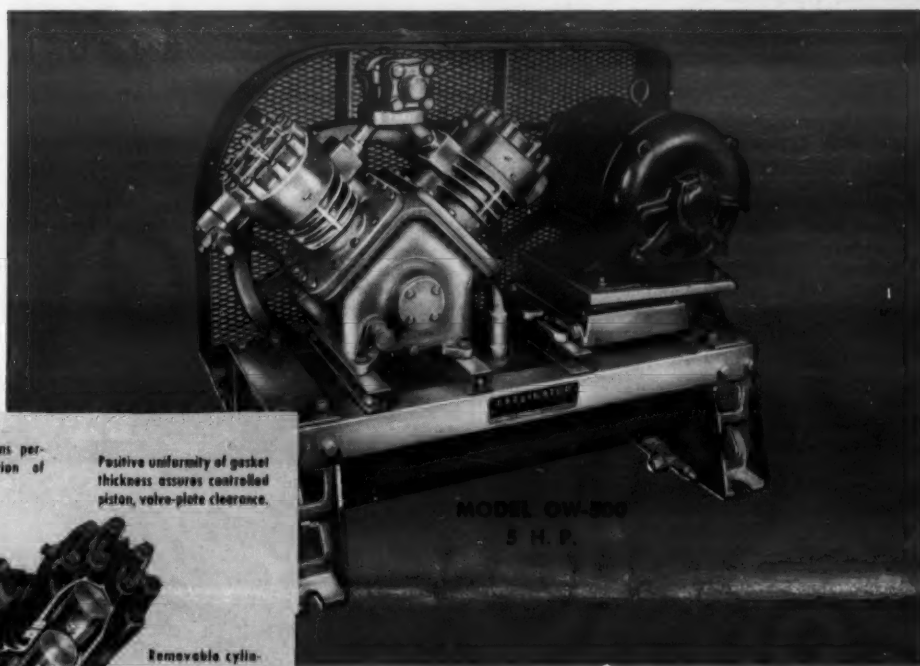
# New Open-Type Condensing Units

The Big Line... **Kelvinator** The Best Mechanisms  
1954 Line Complete with

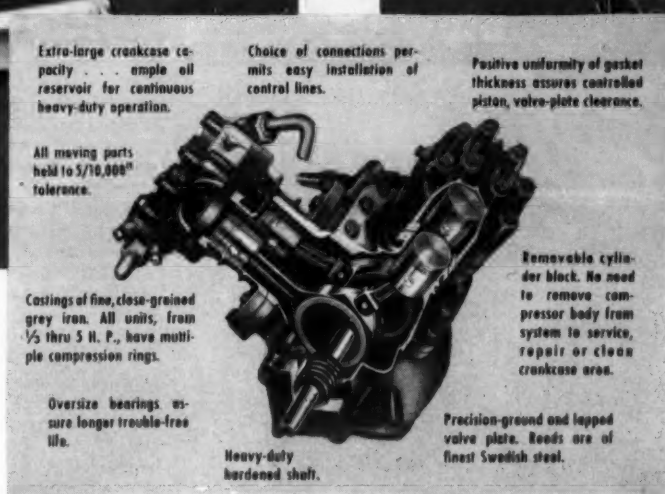
New, Air-Water-Cooled Combination Units . . . New Truck-Type Condensing Units



Complete line of 28 air-cooled units 1/4 H. P. thru 3 H. P.



Complete line of 21 water-cooled units 1/2 H. P. thru 5 H. P.



THIS big new line of open-type condensing units is the most complete in Kelvinator history. Here are new types, new features, new capacities, precision-built to the exacting standards that have always made the performance of Kelvinator equipment outstanding. A complete new line of combination air-water-cooled condensing units from 1/2 H.P. through 3 H.P. now gives you the finest mechanisms in the industry for installations where conditions recommend a combination unit. Equally newsworthy is the complete new line of truck-type condensing units in 3/4 H.P. through 3 H.P.

WHATEVER your refrigeration requirements may be, whether light-duty or heavy-duty you will find precisely the most economical unit, both in original and operating cost, among the 28 air-cooled condensing units from 1/4 H.P. through 3 H.P. or the 21 water-cooled condensing units from 1/2 H.P. through 5 H.P. You can obtain complete information immediately on any or all of these models from your Kelvinator distributor or from Kelvinator, Division of Nash-Kelvinator Corp., Detroit 32, Mich.

Commercial Dept., Nash-Kelvinator Corp., Dept. A C  
14250 Plymouth Road, Detroit 32, Michigan

I am interested in obtaining more information about the profitable new sales territories now open for refrigeration and equipment jobbers.

- ☐ Send complete product and franchise data.  
☐ Have your representative call.

Name . . . . . Title . . . . .

Company . . . . .

Street Address . . . . .

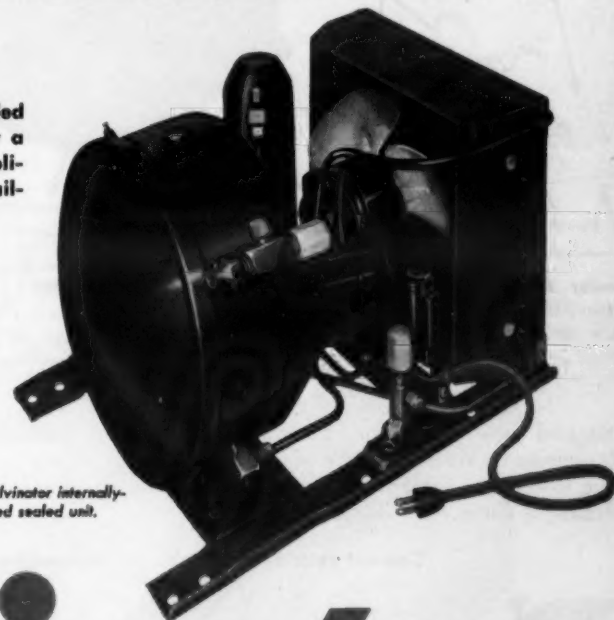
City . . . . . Zone . . . . . State . . . . .

Fill in and stick this coupon to a post card. Drop it in the mail today. Complete product and franchise data will be sent you without delay.

Kelvinator's complete line of hermetically sealed condensing units (1/5 thru 1/2 H. P.) cover a wide range of self-contained and remote applications. Specification and capacity data available on request.

**Now Open:**

New and profitable sales territories for qualified refrigeration and equipment jobbers. Act now.



Typical Kelvinator internally-mounted sealed unit.

# Kelvinator

Manufacturers of Commercial Refrigeration for 30 years

Division of Nash-Kelvinator Corporation, Detroit 32, Michigan





LIPMAN SALES GROUP heard of new plans, products. Seated: (l. to r.) Bob Allen, Sales Manager Fred Kibler, Assistant Sales Manager Harold Hayhurst, Roger Burns. Standing: Mel Anderson, Bruce Merrick, Frank Demes, Harold Odee, and Ed Scott.

## Lipman Reorganizes Sales Territories--

(Concluded from Page 1, Column 5) advertising program were analyzed for area sales tie-ins.

Details on new products, including the new ice cube maker, described by Sales Manager Fred Kibler as having the "newest, most trouble-free design on the market" will be released at a later date.

In order to provide more complete coverage to Lipman distributors throughout the nation, several of the territorial sales assignments were revised.

Salesmen and their revised territories include Bob Allen for the north Atlantic states; Mel Anderson for the east central states, with headquarters in Columbus, Ohio; Roger

Burns in the city of Chicago and the states of Indiana, Michigan, and northern Kentucky; Ed Scott, Minnesota and Wisconsin; Frank Demes handling the west central states, including Illinois outside of Chicago; Harold Odee in the central and southwestern southern states, centering in Louisiana and Texas; and Bruce Merrick, the south Atlantic states.

In addition to the territories covered by direct salesmen, Lipman works through Strange & Lagos, manufacturers' agents in Los Angeles, to cover the West Coast and the southwest.

Company officials stated that some distributorships are open in various sections of the country.

## ASHVE Meeting--

(Concluded from Page 1, Column 3) towers, studies of floor panels, effects of air conditioning on plant growth, solar energy, and the like.

Technical sessions will be each morning with the final session on Wednesday afternoon, Jan. 27.

Registration of members and guests will begin on Sunday, Jan. 24.

Entertainment which has been programmed for this meeting features a welcome luncheon on Monday, annual banquet Wednesday evening, and other events, including some especially for the ladies.

Details of the meeting have been under the direction of D. M. Mills, general chairman of the committee on arrangements. Chairmen of special committees are: A. B. Ullrich, Jr., banquet; F. M. Neil, entertainment; A. J. Natkin, finance; C. L. Fleming, ladies; B. P. Fisher, publicity; E. G. Floeter, Jr., reception; I. A. Naman, sessions; H. W. Broadwell, special events; and A. F. Barnes, transportation.

## H. G. Bogart To Distribute Mitchell Line in N.W. Ohio

CHICAGO—A franchise to handle the 1954 line of Mitchell room air conditioners has been awarded to the H. G. Bogart Co., 1008 Cherry St., Toledo, it was announced recently by E. A. Tracey, vice president of the Mitchell Mfg. Co.

H. W. Sharp is the general sales manager of the Bogart company, which will handle the Mitchell line in northwestern Ohio.

## Plumbing Contractors File Suit as Strike Enters Third Week

CHICAGO—As a strike called by Local 130 of AFL Plumber's Union went into its third week, the chairman of the plumbing contractors' committee filed a suit for \$3,000 damages against the union and its business manager for violation of a five-year contract that has three more years to run.

George D. Hardin, chairman of the labor relations committee of the Plumbing Contractors Association of Chicago, one of the three plumbing contractors' groups that is maintaining a united stand against the union's new wage demands, filed the suit in the name of his own firm, charging the union with failure to supply journeyman plumbers as specified in the contract.

Hardin's suit also charged that the union is trying to get individual contractors to sign up for a new wage agreement in violation of the contract which specifies the plumbing contractors associations as official bargaining agents.

Lee C. Shaw, attorney representing the contractors, said that this is the first of a number of damage suits to be filed against the union.

At the same time, another contractor, Edward O'Connor, a partner in O'Connor Bros. Plumbing Co., charged that the union had offered to furnish him plumbers and did so, despite the fact he had not signed the new union contract. He claimed that other non-signing contractors had also received men, despite the fact the men were supposed to be on strike.

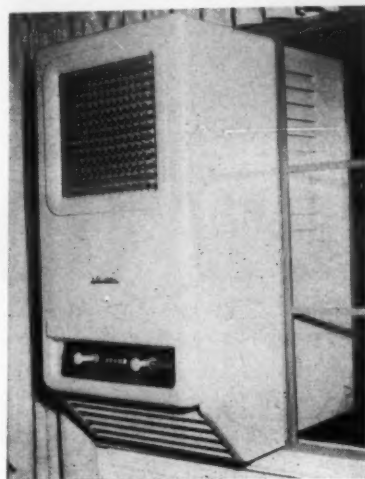
The union is demanding a 15 cents per hour raise effective June 1 and an additional 10-cent raise on Aug. 1. The contractors are refusing to pay this. They have proposed a counter offer of 8 cents per hour. But they want the 8 cents to come out of the 24 cents per hour welfare and pension fund that they pay in addition to the present rate of \$3 per hour.

The three plumbing contractors associations have appealed to journeymen plumbers in a newspaper advertisement to return to work, pointing out that adding to plumbing costs now would mean less construction and repair work for them, as building owners will be encouraged to do more of their own work, as they are permitted under a new state law.

The contractors also contend that the 8 cents per hour could be paid out of the insurance and pension benefit fund, because "experience has shown beyond any question that more money is going into the funds than is needed for your pension and insurance benefits."

## To Cool New Office Building

KNOXVILLE, Tenn.—A 52-room two-story doctor's office building to be constructed for Dr. E. E. Miller at 1547 West Clinch Ave. at an estimated cost of \$55,000 will be air conditioned.



Victor room air conditioner for casement windows.

## Victor Line--

(Concluded from Page 1, Column 4) foot pedal door opener are available in 19-cu. ft. and 15.3-cu. ft. sizes. Both models are marked by new styling and convenience features.

The VUQ-190 occupies less than one square yard of floor space but provides storage space for up to 650 lbs. of frozen food. The separate "Quickfreezer" compartment refrigerated on four sides will freeze up to 65 lbs. of food per day or store up to 200 lbs.

The interior of the Fiberglas-insulated door is of embossed Texolite and is equipped with specially designed basket racks for leftovers and frozen juices.

In the main food storage area, the top shelf is adjustable to give added depth for large packages. The vinyl plastic door gasket and the molded plastic throat liner is in azure blue.

Other features include five-surface cooling with Victor's "Z" bar construction, automatic temperature control, and visible "Guard-A-Lite" that warns of high interior temperatures, overloading, or power interruption.

The VUQ-150, said to occupy not much more than 1/2 square yard of floor space, will hold up to 510 lbs. of frozen food with 17 1/2 sq. ft. of shelf area. The separate 4-surface refrigerated "Quickfreezer" compartment refrigerated on four sides.

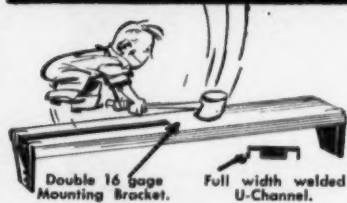
Also new in the Victor line of home freezers this year is the model VQ-25, a double-lid model with 25.1-cu. ft. capacity, including 4 cu. ft. of separate quick freezing capacity. It is powered by a 1/4-hp. condensing unit.

The cabinet measures 80 3/4 in. long, 31 1/4 in. deep, and 30 1/2 in. high. Insulation is a 3 1/2-in. blanket of Fiberglas in walls and bottom, and 2 1/2 in. in the lid with breather ports in the underside of the lid.

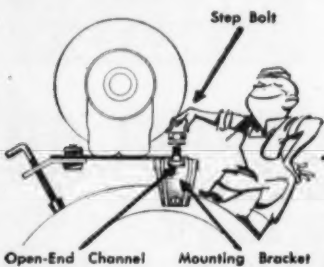
Features include counter-balanced lid that stays open in any position, automatic light that illuminates interior when lid is opened, chrome finished latch with built-in lock, five containers for left-overs in specially designed basket, and three removable deep storage baskets.

## New Improved

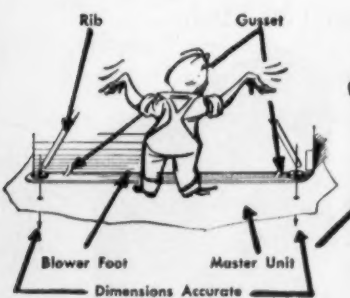
## Blowers



**Motor Mounting Bracket**—more than adequately supports motor insuring pulley alignment. Reduces bearing and pulley wear.



**Motor Mounting**—Step bolts slip easily into open end U-channel and are held securely to permit hex nuts over motor base to be tightened with one hand.

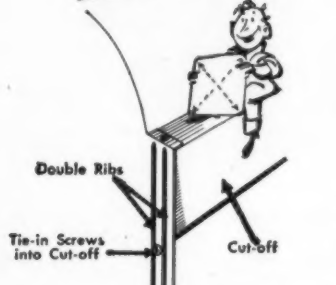
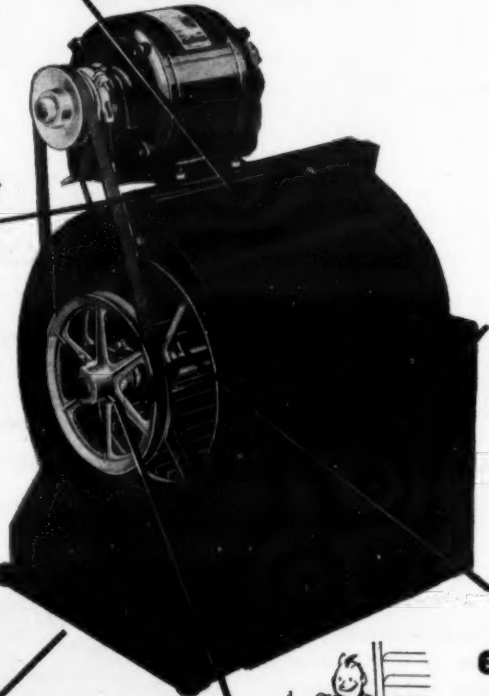


**Blower Foot**—Improved design eliminates handling damage and assures accurate mounting hole dimensions with every blower.

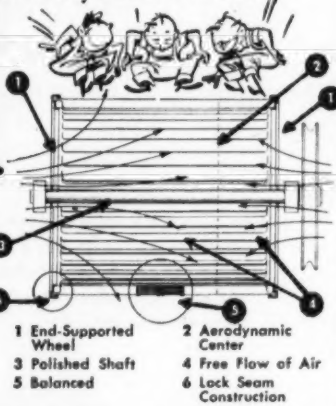
**\*Quieter**  
Trouble-Free Performance

**\*Easier**  
to Install and Service

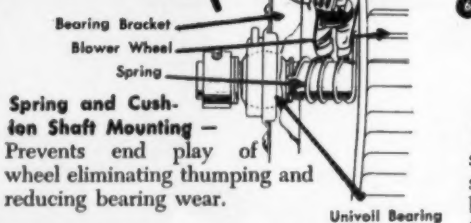
**\*Reduced**  
Assembly Time and Cost



**Blower Outlet**—Four square accurate for easier installation and better seal. Double ribs around three sides of outlet. Outlet sides further reinforced by tie-ins to cut-off.



**Blower Wheel**—Lock seam and end supports give greater wheel strength. Polished shaft reduces bearing wear. No center support to impede air flow.



**Spring and Cushion Shaft Mounting**—Prevents end play of wheel eliminating thumping and reducing bearing wear.

**Note:** New Blowers interchangeable with the Viking Blowers now being installed by many furnace and air conditioning manufacturers.

Equipped with either Viking Univolt Bearings that can be adjusted 360 degrees to assure that the oiling slot is always on top to make oiling easier, or Viking permanently greased bearings that lubricate indefinitely for inaccessible locations.

Contact your Viking Sales Representatives Today for the Complete Story!



DIVISION OF THE NATIONAL RADIATOR COMPANY  
5401 Walsworth Ave., Cleveland 2, Ohio



Viking Blower Packages



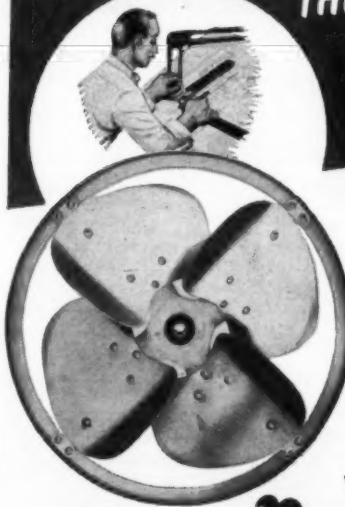
Viking Blower Assemblies



Viking Humidifiers

Other Viking Products  
Dehumidifiers  
Attic Fans  
Window Fans

## THE "RIGHT" PROPELLER IS VITAL TO YOUR PRODUCT



The application of the "Right" propeller can make the difference between a successful product and one that does not come up to the high standards of performance required in today's selling. Meier Nu-Air "Quiet" Propellers, in both evaporator and condenser blades with a "slinger" ring can give you maximum air movement with minimum H. P. yet with a low noise level.

Many manufacturers, outstanding for their products, specify Meier Nu-Air props. Complete engineering services available to aid you in new design work, modification of existing designs or any application problem.

WRITE TODAY FOR MORE INFORMATION ON

**MEIER Nu-Air PROPS**  
TRADE MARK REGISTERED  
MANUFACTURERS

Famed for Dependability EST. 1904 Throughout the World

**MEIER ELECTRIC & MACHINE CO., INC.**  
3525 EAST WASHINGTON STREET • INDIANAPOLIS 7, INDIANA



# FRIGIDAIRE PRESENTS THE NEW LINE OF SILVER ANNIVERSARY ROOM CONDITIONERS



Here's the Silver Anniversary Room Conditioner... newly styled and wearing its glamorous new Coca-Rio Beige color that must be seen to be appreciated. Here is breath-taking beauty that sells on sight.

And there's a size and model for every room... every budget. The 1/2 hp SUPER 33—the 1/2 hp SUPER 50—the 3/4 hp TWIN 75 and the 1 hp TWIN 100.

Each of these models can be offered with a thermostat where local codes permit. Twin Models are available for 115 or 230 volt current—with or without heating feature. Thus Frigidaire Dealers actually have 10 models to sell. Each model is priced competitively and all models are designed to give Frigidaire Dealers the edge over competition in 1954.

*Frigidaire celebrates its 25th year of manufacturing Room Air Conditioners with the greatest sales-winning line in history*

Paying off a quarter-century of air conditioning experience—Frigidaire, developer and builder of the world's first Room Air Conditioner—now introduces its finest line of new models—the Silver Anniversary Line. New selling features and consumer-benefit exclusives will put Frigidaire Dealers out in front in the sales year ahead.

#### New Styling—New Features

There's brilliant new eye appeal in every model—in the clean, trim lines, the decorator color tones, tastefully highlighted with gold and plastic. There's plenty of extra buy appeal, too, with features like High-flow Heat, positive instantaneous extra warmth whenever it is needed. Heating system, optional on Twin Models, is independent of cooling—incorporates many operating and safety advantages.

#### Automatic Operation

Every one of the Silver Anniversary models can be converted to fully automatic operation with a simple, 5-minute thermostat installation (where local codes permit). This means a profitable "step-up" sales opportunity—or allows the buyer the option of adding thermostat later. Twin 75's and Twin 100's also can be purchased with thermostats installed at the factory.

#### Sensational New Kit Permits Mounting Unit Flush Behind Drapes

Here's another exciting plus feature to meet any customer's demand for flush mounting. New special kit allows Frigidaire Dealers to mount units flush with drapes, simply and safely. No sacrifice of proper air distribution. No reduction in cooling power. Full size filter is readily accessible and no bolts are necessary in outside wall.

Built and backed by General Motors... made by the makers of America's No. 1 refrigerator, by the makers of over 16,000,000 refrigeration units... Frigidaire Conditioners enter their 26th year geared for sales as never before in air conditioning history.

## Greatest combination of Sales Features offered in any Air Conditioner

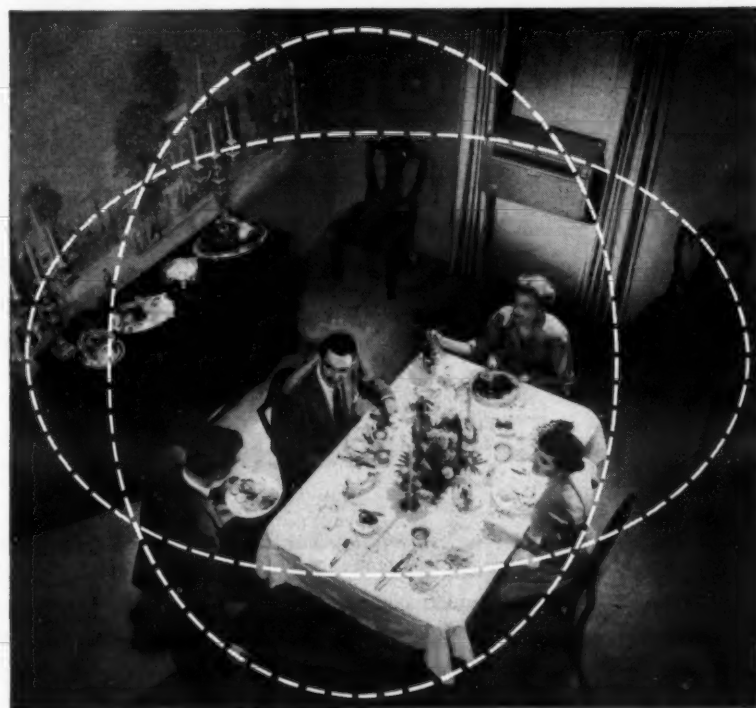
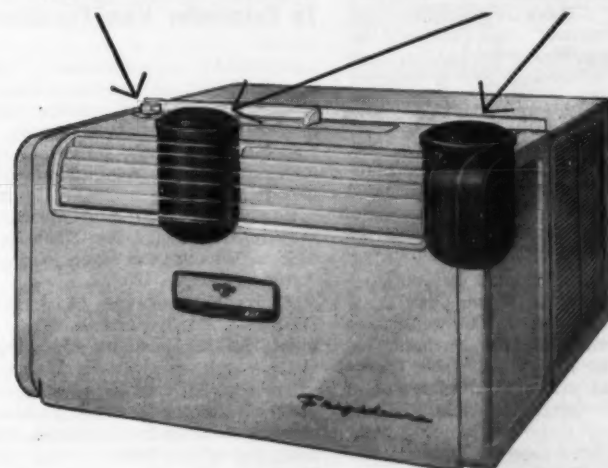
Armed with a double-barrelled exclusive feature story, Frigidaire Dealers are shooting for the largest share of this exciting, rapidly skyrocketing market. Frigidaire's unique, exclusive Twin Meter-Misers, by far the industry's most outstanding consumer benefit, lead the spectacular room conditioner feature parade. It's just like having two air conditioners in one. This feature wraps up the benefits of flexibility, comfort and economy.

And Frigidaire's Great Circle Cooling provides air circulation tailored exactly to any room—regardless of window location. Both these features are exclusive with Frigidaire... both can be demonstrated... both have been registered deeply on the public. Both will receive nearly twice the coverage in 1954 ads and promotions. Additional selling features include sturdy, all-steel cabinets heavily insulated for utmost quiet, extra-large cooling coils for reserve cooling and dehumidifying, and the full-width, full-height filter for positive removal of dirt, dust and pollen.

### Frigidaire "Thrifty Twin" saves up to 1/2 the electric bill! It's like having two air conditioners in one

**ONE** cooling system operates in moderate weather for complete cooling, filtering, circulation, ventilation and dehumidifying at half the electric bill.

**TWO** cooling systems team up to double cooling power economically when temperatures soar. No risk of undercooling... no risk of overcooling.



GREAT CIRCLE COOLING provides complete room comfort that customers are looking for, and get only in a Frigidaire Room Air Conditioner.



## Frigidaire Conditioners

BUILT AND BACKED BY GENERAL MOTORS

Frigidaire Division of General Motors, Dayton 1, Ohio



## INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By GEORGE  
F. TAUBENECK

(Concluded from Page 1, Column 1)

(Kotter), and provided with covers (Lattengitter) to keep out the rain. These cages are called Lattengitter. The kangaroo, after his imprisonment, takes the name of Lattengitterwetterkotterbeutelratte.

One day an assassin (Attentater) was arrested for killing a Hottentot woman (Hottentottenmutter). She was the mother of two stupid and stuttering children in Strattertrottel. This woman (in the German language) is entitled Hottentotenstrattertrottelmutter. Her assassin, of course, would be a Hottentotenstrattertrottelmutterattentater.

The murderer was confined in a Kangaroo's cage (Beutlerattenlatten-gitterwetterkotter) from which, a few days he escaped. Fortunately he was recaptured by a Hottentot who presented himself at the office of the Mayor with a beaming face.

"I have captured the Attentater," prided he.

"Which one," queried the mayor. "We have several charged with the crime."

"The Attentaterlatten-gitterwetterkotterbeutelratte."

"My dear man," worried the mayor, "which Attentater are you talking about?"

"About the Hottentotenstrattertrottelmutterattentater," totted the Hottentot.

"Then why don't you say at once that you have captured the Hottentotenstrattertrottelmutterattentater-attentaterlatten-gitterwetterkotterbeutelratte?"

The Hottentot fled in dismay and defeat.

And thus, kiddies, endeth the tale of this moral.

### Good News!

Despite the general feeling that housing starts this year will drop to about 975,000 from about 1,100,000 last year, most building contractors expect to be busier in 1954 than in 1953, according to Standard Factors Corp.

Standard Factors is a publicly owned corporation, dealing in accounts receivable financing, factoring, and instalment financing. Current financing volume of the company is at the annual rate of \$125,000,000.

According to replies to its survey, many building contractors expect to build as many houses this year as they did in 1953. Smaller building firms indicate that they expect to do a large volume of "remodeling" and "enlarging" of present small houses, many built since 1948.

"One large building company in southern Illinois," reveals Silbert's report, "filed a discouraging reply to this survey. The company found that 'demand was down.' They 'figured' on building 100 houses in 1954, but at the moment could find a market only for 84. Queried as to the company's activities in 1953, the company disclosed it had built 75 houses last year." Adds Silbert's report: "Whether this shows that 'demand is down,' is somewhat debatable."

Another large building company near New York reports a steady flow of prospective homeowners shopping for "buys." "There is no sign of decreasing demand," this company reports to Standard Factors, "only an increased desire to get a sharper price."

Still another building company in Georgia which built 67 homes in 1953, finds demand so great, that the managers believe they will build and sell about 80 homes in 1954—"provided the bank gives us the credit we need."

While reports from small building construction firms follow the same trend, there is one notable difference cited in the Standard Factors' report. Smaller building firms in Maryland, Missouri, California, and Oregon, are "eyeing the small, ranch-type, four or five-room single dwellings which have been so popular since World War II. Many of the couples who bought these homes had no

children or one child when they moved in. Today, most of these families have one, some two, and a few, three children. Several smaller building construction firms are fashioning plans for 'remodeling' or 'enlarging' these ranch homes, to provide either a third bedroom, or a dining room, or more storage space, or a fireplace, or a garage.

"Since many of the ranch type houses are of standard design and on one floor, there is no inherent difficulty in extending the house in one direction or another to add these desired improvements. The feat is to make this 'remodeling' less expensive for the family than acquiring a larger house which many of these families cannot afford."

The smaller contractors are said to be flexible enough to handle this type of work, and several of these smaller builders are found to be preparing "standard" prices for adding a "standard" third bedroom, or dining room, or garage, or fireplace to a "standard" ranch type house in their vicinity.

"While the pressure for housing seems to have subsided somewhat," the report concludes, "it still continues because the number of households originated since July, 1945, is still 1.6 million larger than the number of new housing starts. Moreover, rising population (increasing at the rate of some 2.5 million persons per year) continues."

"While the old folks used to double up with married children, today (because of company pensions or social security insurance) there is a decided movement for the old folks to have their own dwelling. All this has tended to maintain pressure for housing."

### Quote of the Week

Getting married is like gathering mushrooms. The only way to find out whether you have the real thing or poison is to swallow it, and wait.—*Ladies' Home Journal*.

### Reid Heads Advertising, Promotion for G-E Div.

SCHENECTADY, N. Y.—Appointment of Ralston B. Reid as manager of advertising and sales promotion for General Electric Co.'s Apparatus Sales Div. here has been announced by the company.

He replaces J. Stanford Smith who has been named manager of general public relations services. Kenneth G. Patrick, who formerly held the latter position, has been appointed manager of educational relations services in the company's Public Relations Services Div.

Reid has been manager of program planning and research for the Apparatus Advertising and Sales Promotion Dept. since early last year. Prior to that he served as assistant manager of the department.

Patrick was at one time in charge of G-E consumer goods public relations in New York City, after which he became assistant to the manager of the company's former Advertising and Publicity Dept. In 1952 he was appointed manager of the General Public Relations Services Dept.

Smith served as head of transportation and industrial advertising, aircraft instruction, and visual education sections within the Apparatus Advertising and Sales Promotion Dept. before being named department manager in 1947. Three years earlier he introduced and planned the "More Power to America" program.

### Richard Purdy Named Assistant To Kelvinator Vice President

DETROIT—Appointment of Richard T. Purdy as executive assistant to Howard A. Lewis, vice president in charge of financial, export, and subsidiary company activities, Nash-Kelvinator Corp., was announced recently.

Purdy has been government contact representative for Nash-Kelvinator in Washington since joining the company late in 1950.

A graduate of the University of Michigan, Purdy was in the investment banking business from 1929 to 1942.

During the war he was assistant to the director of the Automotive Council for War Production, and later manager of the Motor Truck Div. of the Automobile Manufacturers Association.

### U. S. Air Force Plans Technical Conference In Washington Feb. 1-4

WASHINGTON, D. C.—A Refrigeration and Air Conditioning Technical Conference will be held by the U. S. Air Force at the Pentagon here Feb. 1 to 4, according to Lt. Col. James B. Porter, deputy chief of the Air Force Maintenance Division.

Engineers responsible for refrigeration and air conditioning in the major air commands will attend, and many from the bases will be present, he said.

The Air Force has also invited interested personnel from the Corps of Engineers, Office of the Quartermaster General, Bureau of Yards and Docks, Bureau of Ships, Army and Air Force Motion Picture Service, and the National Bureau of Standards, he added.

### Colombia Distributor Moves To New Quarters In Bogota

BOGOTA, Colombia—Refrigeracion Praco, distributor of Frick equipment in Colombia, has moved into modernistic new quarters at Carrera 13 #26-08, here.

The building provides ample space for display of equipment on the ground floor, while the mezzanine is available for executive offices and drafting and engineering work.

The firm maintains engineering service facilities for numerous businesses, particularly the dairy industry.

### Du Pont Research Discovers

## Solubility of 'Freon' In Water Depends on Temperature, Pressure, Fluorine Atoms

WASHINGTON, D. C.—Solubility of "Freon" fluorinated hydrocarbon compounds in water depends upon the pressure, temperature, and the number of fluorine atoms in the compound, the Du Pont Co. disclosed here in reporting on a two-year research project for the refrigeration industry, at the recent annual meeting of its American Society of Refrigerating Engineers.

Increases in pressure result in a nearly proportional increase in the amount of "Freon" dissolved, the report showed, but solubility decreases as the temperature rises. For "Freon" compounds having the same number of carbon atoms, solubility also decreases as fluorine is substituted for either hydrogen or chlorine in the molecule.

Included in the research study, outlined by Dr. H. M. Parmelee of the company's "Kinetic" Chemicals Div., were six compounds. They were "Freon-12" dichlorodifluoromethane (CCl<sub>2</sub>F<sub>2</sub>), "Freon-13" monochlorotrifluoromethane (CClF<sub>3</sub>), "Freon-14" tetrafluoromethane (CF<sub>4</sub>), "Freon-22" monochlorodifluoroethane (CHClF<sub>2</sub>), "Freon-23" trifluoromethane (CHF<sub>3</sub>), and "Freon-115" monochloropentafluoroethane (C<sub>2</sub>ClF<sub>5</sub>).

Facts obtained from the du Pont study, along with existing data, provide much more complete information on the solubility relationships

between the "Freon" fluorinated hydrocarbon compounds and have limited solubility in water.

Solubilities of the various "Freon" compounds varied from 0.026 lbs. per gallon of water at 14.7 p.s.i.a. pressure and 77° F., in the case "Freon-22" to 0.0002 lbs. per gallon under the same conditions with "Freon-14" (tetrafluoromethane).

Solubility of the compounds, it was found, decreased with increasing temperature when the pressure was held constant.

### Pittsburgh Plate Glass Adds 75,000 Sq. Ft. to Fiber Glass Facilities

PITTSBURGH—Pittsburgh Plate Glass Co. has announced the purchase of a four-story factory building and seven acres of land adjoining the firm's Fiber Glass manufacturing plant at Shelbyville, Ind.

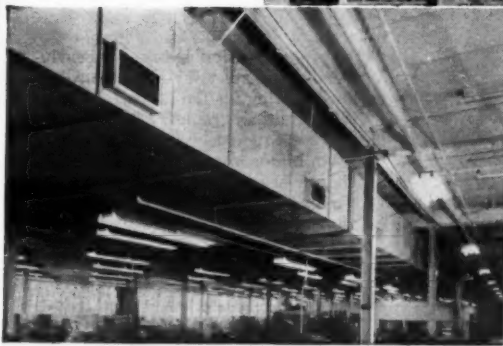
Formerly owned by Porter Carpet Sweeper Co., the building contains approximately 75,000 sq. ft. of floor space. Pittsburgh Plate will utilize the building for warehousing and shipping purposes.

The company commenced manufacture of superfine and yarn fibers at the Indiana location last year. Manufacturing operations have constantly expanded since then.

# Economies gained by reasons for the TREND to

Air conditioning costs are a weighty matter for sprawling plants—even more so for a firm like Rotor Tool. Through complete conditioning, however, they've obtained savings which dwarf the higher primary cost.

Whether it's 80° or 100°F. outside, there's no efficiency lag here. Overhead ducts carry cool comfort into plant areas . . . help assure maximum production at all times.



## Efficiency, safety and comfort important to growing "small-structure" market

were of Worthington manufacture, operated with Du Pont "Freon" refrigerants.

Complete conditioning has filled the bill. Year-round comfort is supplied throughout both sections but, more important, the plant has gained "new" economies. Rotor's own studies show that efficiency has jumped 3 to 5%. Peak production is maintained on scorching, muggy days, when partly conditioned shops often have to close or, at best, suffer efficiency lag. The cost: less than 3¼¢ per man per hr., or less than 1% of labor and overhead expense combined. In addition, the system keeps the plant cleaner, minimizes dangers of moisture and rust and reduces need of tool resetting. And such highly finished parts as magnesium can be safely machined to tolerances of .0003".

"Shall we install complete or partial air conditioning?" This question, which confronts many manufacturers today, faced Rotor Tool Co., of Cleveland, Ohio, in 1952. This portable-tool firm was building a new plant, and management had to decide on the type of system to install. They wanted to assure complete temperature and humidity control, impossible in their former, partly cooled plant. Summer, with its energy-sapping power, had always been a big problem. Yet they had to determine whether the savings from complete conditioning would overshadow higher primary cost. Their own "summer trouble," and that of partly cooled shops nearby, convinced them—and they told the architects and Leonard H. Krill Construction Co. to install complete systems for factory and office alike. Units specified



## Amana To Boost Freezer Volume 30 to 40% In '54

CHICAGO—Amana Refrigeration, Inc., manufacturer of home food freezers, expects to increase production in 1954 by 30 to 40% over 1953, the biggest year in its history.

George C. Foerstner, executive vice president of the firm, said that with the expanded volume that Amana anticipates, the company is aiming at capturing 20% of the business done by the entire freezer industry this year.

The Amana official spoke at a press conference held at the Sheraton hotel, in conjunction with the Winter Home Furnishings Market.

During 1953 Amana changed over to new models but still increased production by 20% over 1952. The higher output was made possible by a major expansion program, doubling the size of the company's plant at Amana, Iowa, which Foerstner said is 90% complete.

New manufacturing facilities already installed include an automatic painting system, a steel processing plant which enables the company to process its own steel for freezer cabinets from rolls, and new giant high-speed presses.

Principal basis for the company's encouraging outlook for 1954 is the "overwhelming nationwide response" to Amana's new 1954 models introduced in November at the distributor level. The company is back-ordered on all three new models and deliveries at the present are on allocation.

"Our new warehouse doesn't have a single one of these models in

stock," Foerstner said. He added that the company is holding three times as many unfilled orders today as it did at this time last year.

"The trend to upright freezers continues to grow, and we expect that uprisings this year will equal chest models in sales," he declared.

"In addition to the demand for uprisings, housewives are buying larger and larger models. Average size sold by the industry was about 13.5 cu. ft., while the average Amana size was more than 16.5 cu. ft. Despite the steadily increasing popularity of the larger uprisings, it is interesting to note that 30% of all Amana freezers sold were installed in kitchens."

A healthy sign in the freezer business outlook for 1954, the Amana executive said, is the low inventories now held by Amana distributors. Their stocks at the end of 1953, he said, were only half of what they were at the end of 1952. Some distributors did not have a single freezer in stock at the end of 1953.

"With the increasing interest in and demand for freezers, distributors have been placing healthy orders for 1954 business," he said.

## Greek Royalty Taken For 'Real Cool' Ride

HOUSTON, Texas — While in Houston recently, King Paul and Queen Frederika of Greece rode in an air conditioned automobile for the first time.

After riding in the city-owned Cadillac of Mayor Roy Hofheinz, they said they enjoyed it thoroughly, and expect to order some air conditioned cars for their own entourage in Greece.

## Canadians Stage First Refrigeration, A. C. Show In Toronto, Feb. 23-25

TORONTO, Ont., Can.—The first Canadian Refrigeration and Air Conditioning Show, displaying the newest products of every Canadian manufacturer, will be staged in the Coliseum at Exhibition Park here from Feb. 23-25.

A quarter mile of exhibits displaying the latest in every type of refrigeration and air conditioning equipment for home, commerce, and industry is promised. Value of the equipment exhibited is estimated at more than \$1,000,000. The Canadian Refrigeration Manufacturers Association is sponsoring the event.

Admission to the show is by ticket. A supply of these can be obtained free from the Secretary-Manager, First Canadian Refrigeration and Air Conditioning Show, Room 1209, 137 Wellington St. West, Toronto.

On its final day, the show will be open to the public who will see an exhibition of "Heating the Home with Refrigeration."

In conjunction with the show, the Refrigeration Service Engineers Society of Canada will hold its annual convention, according to H. S. Parish, the secretary-manager.

In addition to Parish, officers of the show committee are: Willis S. McLeese, chairman; J. G. McMillen, attendance and publicity; R. H. Dyson and C. Dowson, program; C. W. E. Wright, F. A. M. Dawson, and McMillan, budget; W. Smallwood and W. W. Miller, space allocation; J. B. Graydon, J. M. Lock, space sales.

## More Action on 'Death Traps' Institute Drafts Model Ordinance

WASHINGTON, D. C.—A model city ordinance prohibiting the abandonment of iceboxes and refrigerators in places accessible to children has been fashioned by the National Institute of Municipal Law Officers and has been adopted by at least 30 municipalities, Charles S. Rhyne, general counsel for the institute, announced recently.

The model ordinance, which has been circulated to all member municipal law officers in the country, is drawn up as an emergency ordinance under the general police power of cities specifically to provide protection to children.

Heart of the ordinance are the two following paragraphs. Other paragraphs deal with legal technicalities necessary to such ordinances.

"It shall be unlawful for any person, firm, or corporation to leave or permit to remain outside of any dwelling, building, or other structure, or within any unoccupied or abandoned building, dwelling, or other structure under his or its control, in a place accessible to children, any abandoned, unattended, or discarded icebox, refrigerator, or other container which has an air-tight door or lid, snaplock, or other locking device which may not be released from the inside, without first removing said door or lid, snaplock, or other locking device from said icebox, refrigerator, or container.

"Any person, firm, or corporation violating any of the provisions of

this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in an amount not exceeding . . . dollars or be imprisoned in the . . . jail for a period not exceeding . . . days or be both so fined and imprisoned. Each day such violation is committed or permitted to continue, shall constitute a separate offense and shall be punishable as such hereunder."

Meanwhile, the Christmas holiday was marred for Mr. and Mrs. Bernard Chaffin of La Habra, Calif. when their son Dennis, 9, was found dead in their freezer on Dec. 24.

Dennis, the 22nd such victim since the five Hallman children died in an old ice chest last August, was found by his sister, Shirley, after several hours of searching. Dennis had broken a hinge and cut holes in the insulation in an effort to escape. The freezer, which had not been used since August, had just recently been turned on to provide ice cubes for a Christmas party.

Memphis, Tenn., close to the scene of the Hallman tragedy, is reported to have removed 389 icebox "death traps" from the city before Christmas.

In Detroit, Meyer Leshman, the first violator of the city's "icebox ordinance," paid a \$25 fine in Traffic Court for leaving two empty refrigerators with doors intact in the rear of his used appliance business. Leshman claimed he did not know who left them there.

## Refusal To Remove Door Brings 6 Mos. Jail Sentence

RIVERSIDE, Calif.—Refusing to remove the door from an abandoned refrigerator in his yard as a source of peril to children because "the little brats have no business in my yard," Charles Fader here is spending 45 days in county jail to reconsider his attitude.

Municipal Judge Elwood Rich actually sentenced the 77-year-old Fader to six months in prison, but suspended all but 45 days of it. Fader had been placed on probation early last year for firing a rifle at an 11-year-old boy who trespassed on his property.

Pleading guilty to refusing to remove the door when warned by a police officer, Fader said that he had removed the latch since.

In Pittsburg, Calif., the Doolin Refrigeration Co. has earned consider-

able local publicity by voluntarily conducting a private campaign to help rid Contra Costa county of death traps.

The company has offered to go anywhere in the county free of charge to render abandoned boxes harmless. James Doolin, owner of the firm, said that last fall his men hauled 16 boxes to the city dump, after removing the doors.

Two arrests were reported in Pittsburg for violations of the state and local death trap laws.

Meantime, district commissioners of Washington, D. C. have passed a regulation providing for \$300 fines or 10 days in jail for persons leaving an unused or discarded icebox with latches intact in a place accessible to children. This law becomes effective on Feb. 6.

## Park Ave. Apartment Gets Air Conditioned Addition

NEW YORK CITY—Completion of a fully air conditioned 17-story and penthouse addition to the 7 Park Avenue apartment building here is scheduled for early next spring, Norman Tishman, president of the Tishman Realty & Construction Co., Inc., announced recently.

The new addition designed by David Moed, architect, and being constructed by Jacques and Leon Schwalbe, will feature the Trane "Custom-Air" system of air conditioning. This unit system provides for central conditioning of ventilation air with individual temperature control through "UniTrane" room units.

These units, semi-recessed in each living room and bedroom, will warm or cool incoming and recirculating air, filter it, and circulate it through the room. Thermostatic controls on the units permit individual regulation of temperature.

Ventilation of air will be processed by a "Climate Changer" which will temper, filter, and humidify the air before sending it to the rooms through low pressure ductwork.

Chilled water for summer cooling will be piped to room units from an 81-ton capacity "CentraVac"—a self-contained, hermetically-sealed centrifugal refrigeration machine. The CentraVac is completely automatic in operation and will supply 250 g.p.m. of chilled water at 44° F.

J. E. Schecter Corp., New York, is installing the air conditioning system in addition which will "square out" an existing L-shaped apartment building. The new wing will contain 60 apartments ranging in room size from 1½ to three rooms with monthly rentals averaging about \$80 per room.

## Sterling Air Conditioning Moving to Gastonia, N. C.

GASTONIA, N. C.—Sterling Air Conditioning Corp. of Charlotte will move to Gastonia in January, it was learned.

Officials said a temporary location has been secured in a two-story building at 258 W. Main avenue, but the company plans to build a plant soon.

Sam P. Stewart, president, said Sterling plans to feature home air conditioning units. When the new plant is built here, Sterling will have 30 to 40 employees on its assembly lines, according to the manufacturer's announcement.

Roger E. McArver is executive vice president, treasurer, and general manager of the corporation. Directors are S. M. Stewart, Allen Sims, Denton Cruse, L. G. Alexander, and McArver.

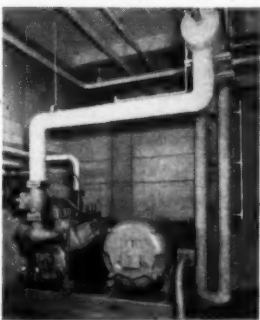
# precision-parts plant... complete air conditioning

## CENTRAL AND "PACKAGE" SYSTEMS USED

Factory and office utilize different types of systems. Central cooling, with a 125-h.p. reciprocal compressor charged with "Freon-12" refrigerant, serves the 32,000 sq. ft. of plant space, while two "package" units of 5- and 7½-ton capacity comfort-cool the office. These compact machines are operated with "Freon-12" and "Freon-22" refrigerants, respectively.

Basic plant heat load is 115 tons. In summer, the system mixes shop and fresh air and passes both through electrostatic plastic filters and cooling coils directly into plant areas. In winter, after fresh air is mixed, a thermostat directs part of the air through a gas-fired unit before it passes to shop ducts.

Serving working areas, rest rooms and dispensary, the office units operate through two separate thermostats and separate ducts. Heat coils in the machines permit flow of 500 cfm of fresh, heated air. In winter, comfort is provided by a hot-water heater, through radiators along each wall. To prevent transmission of noise, the three systems were made to function independently of one another.



Powering plant's central system is 125-h.p. reciprocal compressor of Worthington manufacture.

## "EFFICIENCY EXPERTS"

Several modern devices have been installed for top plant efficiency. For example, a feather valve on compressor permits it to operate at only ¼ or ½ load, cutting power costs. Dampers controlling the ducts are interlocked so that outside air does the cooling when temperatures drop below 65°F. And an exhaust capable of 30,000 cfm efficiently removes smoke caused by machining. Variable by-pass heating control is by automatic dampers synchronized with a thermostat that maintains a fixed shop temperature. Whether supply air is 75° or 100°F., by-pass controls keep temperatures in line with plant needs.

Rotor Tool wanted an economical system. With complete conditioning, they've obtained maximum temperature and humidity control, and increased efficiency and

comfort. Even disregarding these savings, installation cost was relatively little more than that of an ordinary ventilating system of exhaust fans and blowers.

## MARKET EXPANDING IN MANY DIRECTIONS

Benefits gained by the firm . . . greater efficiency, economy and comfort . . . are the main reasons why plants, stores and office buildings throughout the country are considering—and installing—complete systems. And the market's expanding, as new production, processing and marketing techniques come into play . . . as awareness of the need for complete control grows . . . and as demands for comfort enter more and more phases of everyday life. Many such prospects on your list might install complete conditioning—if its advantages are proved to them. So why not approach them with this plan in mind? Line up your best prospects . . . reach them via personal call, telephone or letter . . . and explain how a complete system may help them solve many problems.

When discussing equipment needs, be sure to recommend a type of unit designed to use Du Pont FREON® fluorinated hydrocarbon refrigerants. These refrigerants are safe . . . nonflammable, nonexplosive and virtually non-toxic. Made under rigid laboratory controls, they are pure and uniform. "Freon" refrigerants contribute to long, economical operation of the equipment . . . and meet building-code requirements everywhere. An illustrated brochure, "How Air Conditioning and Refrigeration Benefit Industry," will be sent on request. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Div., Wilmington 98, Delaware.



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SAFE REFRIGERANTS

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... with Fiberglass cabinet!

Fiberglass ends cabinet rust ★ Won't chip, dent or crack ★ Pushbutton usAIRcontrol Panel ★ 3 sizes: ½ h.p., ¾ h.p. and 1 h.p. ★ Cools and heats ★ Resistance Heater or Reverse Cycle Heat Pump ★ 5 year Warranty Write Dept. ACRN 14

UNITED STATES  
AIR CONDITIONING CORPORATION  
MINNEAPOLIS 14, MINNESOTA



## To Get Premium Price

## Western Corn Grower Employs Refrigeration To Cool Crop Preparatory to Shipping East

EAST STANDWOOD, Wash.—Installation of refrigeration equipment on his farm near here solved a corn cooling problem for ex-GI George Emerson and is helping him sell his crop profitably to eastern markets.

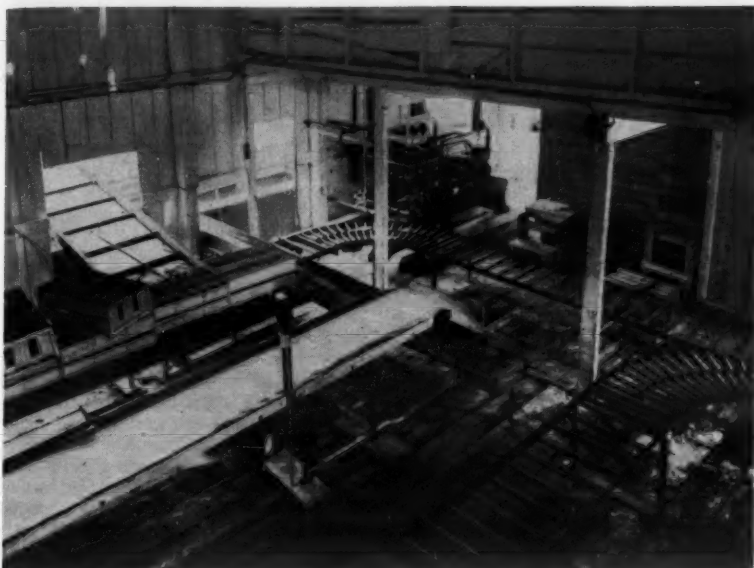
An enterprising young man whose first love was farming, Emerson obtained his land upon returning from active duty in the Army during World War II. He decided to make his farm a one-crop endeavor, and proceeded to plant 110 acres in top-grade corn.

## CORN TO BE SHIPPED EAST

Emerson's idea was not to produce for the local Washington markets, but to ship his crop as a fresh-market item to the eastern population centers. Since Washington corn matures in September and October, much later than eastern corn, it would command premium prices as an off-season item.

To harvest and ship this corn is a fast operation because it is refrigerated to maintain its freshness. This cooling is necessary immediately after picking to preserve its field-fresh qualities and retard heat increase from the fields.

In quick-chilling his corn, Emerson used to require up to 15 tons of ice a day for the long trip east. The ice was quite a problem because of the handling and trucking in deliver-



INTERIOR VIEW of corn sorting and crating building showing conveyor ramps and belt with two Frigidaire 15-hp. refrigeration compressors in center, rear. The conveyor equipment is outmoded Post Office machinery that was inexpensively adapted to this operation.

ing it to the packing shed. Also, if picking operations were suddenly stopped, due to inclement weather or for some other unforeseen reason, the ice on hand promptly melted, resulting in a complete loss.

Emerson cast around for an answer to his refrigeration problem and, in so doing, contacted a refrigeration dealer in the nearby town of Everett.

The dealer, Langford's Refrigeration Co., made a survey of the opera-

tion and recommended two 15-hp. Frigidaire water-cooled compressors. These units were installed in the packing and grading shed adjacent to the chilling tank paralleling the outside of the building.

## TANK BUILT IN 2 SECTIONS

This tank is built in two sections—one section containing 30 Dole plates evenly spaced down the 80-ft. length and, the other, an open chilling tank separated by a baffle plate through which the corn is floated and propelled by a paddle-type conveyor at variable speeds.

The Dole plates containing the piped refrigerant from the compressors chill the 10,000 gals. of water used in the tank operation. They also produce a reserve bank of ice when the corn is not being chilled, such as during the night hours when work has stopped.

During the height of the picking season, Emerson employs about 20 persons in the hand-picking operation. They strip the stalks in the fields, which yield about 60 tons per day in an 8-hour shift.

## WATER PROPELLS CORN

Trucks pick up the corn and dump it onto a short conveyor belt at one end of the chilling tank. The ears are carried up the belt which deposits them in the tank where the cold water, forced through an 8-in. pipe, carries them in its propellant stream assisted by revolving paddles.

The ears are then gently floated down the length of the tank and onto another conveyor which picks them up and carries them into the sorting and crating building.

About 45 workers handle the sorting and crating. Women do the sorting and packing, with five dozen ears going into each crate. The men remove the completed crates from the belt, wire them together and attach trade-name stickers. The crates are then trucked to the nearby railway for the start of their journey eastward.

### Refrigerated Display Table Gives Push to Ham Sales

CANTON, Ohio — Ralph Kandel, meat manager for Kress' IGA Supermarket in Canton, found a way to increase the sale of hams and at the same time to gain space in the meat display cases for larger quantities of fresh meats.

He simply applied the old selling rule which says that if you display it in mass—and it's good—you're going to sell more.

So Kandel removed the display of hams entirely from the regular meat cases and moved it to a 4-ft. by 4-ft. Sherer refrigerated display table installed at the end of a gondola directly opposite the regular meat display. Taking the hams out of the cases left more space for a better, bigger fresh meat display.

Kress customers seemed to "go for" the special ham display and since the display table can be shopped on three sides, it actually gives the same access to merchandise as a 12-ft. display case.

The 16-sq. ft. table is devoted exclusively to hams, cottage hams, and callas—and it shows average sales of more than 3,000 lbs. of these items a week.

When a special push was given to ham one week in October, sales on Thursday, Friday, and Saturday of that week amounted to better than 8,000 lbs. of hams, plus approximately 500 lbs. of callas and cottage hams.

### John W. Logan Will Head Cambridge Corp.

CAMBRIDGE, Mass. — John W. Logan has been elected president of Cambridge Corp., an engineering and manufacturing company owned jointly by Carrier Corp. and Arthur D. Little, Inc. This was announced recently by Cloud Wampler and Earl P. Stevenson, the chief executive officers of the two parent companies.

Cambridge Corp. was formed in 1950. Its sales volume amounted to \$62,000 in 1951, and will be approximately \$5,000,000 this year. The present backlog of the corporation is in excess of \$8,000,000.

The present activities of Cambridge Corp. are principally in the areas of extremely low temperature equipment, gas refrigeration and transport, helium refrigeration, and air and gas filtration.

Originally Cambridge Corp. was formed to manufacture and sell an absolute air filter, developed for the Atomic Energy Commission. However, the company is now also engaged in "transition engineering and manufacturing," which seeks to bridge the gap between research and commercial production.

Prior to his present assignment, Logan was with General Electric Co. for the 22 years following his graduation from the University of Missouri in 1931 with a BS degree in Electrical Engineering. Recently he has been manager of the application engineering department of the Knolls Atomic Power Laboratories, which are being operated by General Electric Co.

Dr. Bruce S. Old, who has been president of Cambridge Corp., will become chairman of its board of directors. Logan will also be a director of Cambridge Corp., and chairman of its executive committee.

The headquarters of Cambridge Corp. are in Cambridge, Mass. Its plants are located in Cambridge and Somerville, Mass., and in Denver and Boulder, Colo. The corporation now has approximately 600 employees, many of whom were formerly employed by the Carrier and Little organizations.

### Worthington Appoints Gardner to Export Post

HARRISON, N. J. — Nathan A. Gardner has been appointed manager of air conditioning and refrigeration sales, export department, Worthington Corp., according to S. Riley Williams, vice president in charge of foreign business.

Gardner will succeed H. E. Wood who had recently been appointed Far Eastern manager of Worthington's export department.

Gardner joined the Worthington organization in 1945 as an estimating engineer in the export department, after having served as a captain in the corps of engineers of the U. S. Army. He has advanced successively to application engineer, senior engineer, and most recently, assistant manager of air conditioning and refrigeration sales, export department.

### S. & R. Soda Fountain Picks Canadian Representative

NEW YORK CITY—S. & R. Soda Fountain Mfg. Co. here has announced the appointment of Ray Prescott as factory representative in Canada. He will headquarter at Suffern, N. Y.

no matter how **Large** or **SMALL** the application there's a **SPORLAN** Peak Performance Solenoid Valve to fit your needs!

Nothing can touch the Peak Performance of **SPORLAN SOLENOID VALVES...** for Peak Performance is Wound Right Into The Sporlan Solenoid Coil.. then Permanently Sealed In!

Sporlan solenoid coils are layer wound (not random wound) and interwoven with layers of cotton thread. This construction prohibits build-up of damaging electrical pressure across the turns of wire, thus minimizing possibilities of coil burnouts. After the coils are wound, they are twice dipped in high temperature insulating and water repellent varnish to thoroughly impregnate the cotton thread insulation, and are baked after each coating.

As a final precaution, the coils are then dipped in a protective sealer, and again baked to prevent any moisture infiltration.

**SPORLAN Type 171 Solenoid Pilot Control** offers the latest developments in the field of Pilot Controls, which Sporlan has pioneered for many years. It is made in one size only and used in place of extra large Solenoid Valves on F-12, and F-22. It costs less, is more economical to install, and assures positive shut-off of the liquid line.

★ Type 12 now available with **MANUAL LIFT STEM** in Pipe-Sweat and Flare Connections

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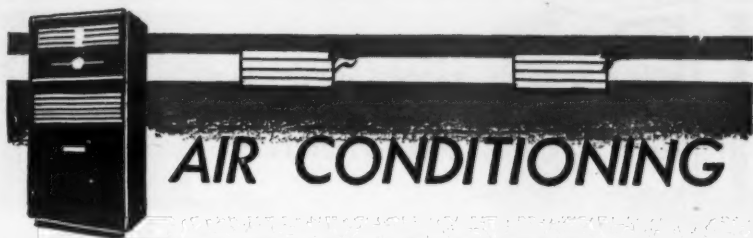
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REFRIGERATION Parts and Supplies  
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### Pyle-National Purchases Two Lines from Adapti

CHICAGO — Pyle-National Co. here, manufacturer of electrical and air conditioning equipment for railroads and industry, has purchased the patterns, tools, dies, jigs, fixtures, and inventory of two lines of electrical products from Adapti Co. of Cleveland, H. V. Engh, president of Pyle-National, announced.

Pyle-National will manufacture and sell these products, consisting of conduit fittings and vaportight lighting fixtures, under the trade name of "Pylets."

### Hotel Dallas To Complete Cooling Job This Year

DALLAS — Jefferson hotel here, one of the city's landmarks, has changed its name to the Hotel Dallas.

"We have already spent \$175,000 air conditioning and redecorating half of the rooms," said manager E. K. Clark. "Included in our plans for 1954 are complete air conditioning, the construction of a motor entrance, and a new lobby featuring highspeed automatic elevators."

### White Represents Binks In Cincinnati Territory

CHICAGO — Binks Mfg. Co. announces the appointment of White Sales Associates, 1416 Central Parkway, Cincinnati, as representative for Binks' complete line of forced and natural draft cooling towers in the Cincinnati territory.

C. S. White, head of the White organization, and his associate, L. L. Layman, are both experienced in refrigeration and air conditioning.

### Truog-Nichols Distributes Airtemp In Kansas City

KANSAS CITY, Mo.—Appointment of Truog-Nichols Distributing Co. as wholesale warehouse distributors for Chrysler Airtemp residential air conditioning, heating and "packaged" air conditioning products in the Kansas City area was announced recently by F. G. Hill, Airtemp's Kansas City regional manager.

At the time of the appointment, Clyde Nichols, president, announced that a hard-selling residential air conditioning promotion campaign will begin in early spring.

A new warehouse facility and delivery system will provide the Kansas City area with quick delivery service. A complete engineering service also will be available.

### New Carrier Dealer Named For Two Florida Counties

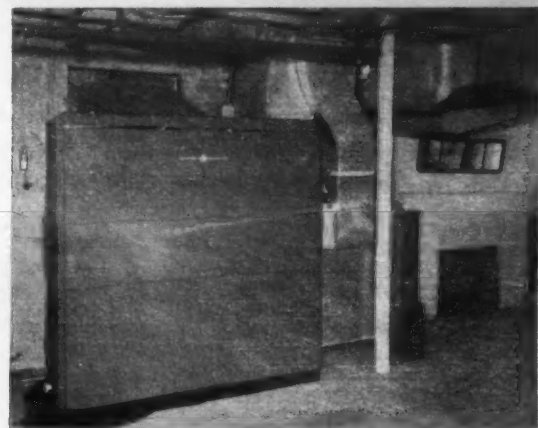
DAYTONA BEACH, Fla.—Carrier Corp. and Florida Weathermakers, Inc. have announced the appointment of a new Carrier dealer, Florida Weather Engineers, to serve Volusia and Flagler counties.

The firm, located at 400 N. Beach St. here, has been taken over by a new owner, W. N. Nelson, former Jacksonville, Fla. trucking firm operator. Florida Weathermakers made the change so it can devote full efforts to the distribution of Carrier equipment in northern and central Florida, it was explained.

Nelson said John Hancock, former Daytona Beach resident, would return here as the new firm's engineer. Callis Thompson, who was with Florida Weathermakers, remains as service manager, and Laura Hughes is being retained as secretary.



HOMELIKE, RELAXED ATMOSPHERE is achieved in closing room of the new General Electric Weathertron office in Chattanooga, where Vern Hagmann, office manager (r.) demonstrates with Engineer Warren Oster how the oversize coffee table is used to spread out plans for the customer.



INSTALLED IN THE GARAGE beneath the O. D. Scruggs home in Chattanooga is this 5-ton Weathertron that has provided both heating and cooling for the seven-room house for two years. The owner reports excellent results.

## Color, Soft Lights, Homelike Surroundings Mark G-E Approach To Selling Weathertrons

CHATTANOOGA, Tenn.—A colorful, simply decorated, ultra-modern office has been established recently in downtown Chattanooga by the Weathertron Dept. of the General Electric Co.

Vern Hagmann is manager of the office, which is devoted exclusively to the sale of General Electric's new air-to-air heat pump for commercial and residential installations. He covers eastern Tennessee.

Hagmann pointed out that there is only one other Weathertron office in the country—at Birmingham, Ala. He added that a third is expected to be opened soon in Los Angeles.

The office is laid out with a display room in front, a general office behind it, and at the far rear a small closing room that is appointed like a home living room.

The layout, according to Hagmann, is a merchandising idea of H. M. Brundage, merchandising manager of the Weathertron Dept. Walls and ceilings are painted in bright solid colors—one wall and the closet doors in deep blue, the rest in bright yellow.

Hagmann is particularly proud of the closing room. Here, away from the bustle and noise of the outer office, he, or Warren Oster, engineer of the Chattanooga branch, can talk to prospects in peace and quiet.

In the home-like surroundings, the customer can relax in a comfortable chair or divan. The salesmen can spread blueprints or literature out before him on a low, broad coffee table, and they can talk intimately without interruption.

When attempting to sell a prospect a complete home air conditioning and heating system, all these factors are important and conducive to the sale.

Hagmann declared that Weathertron has made a number of installations in the eastern Tennessee area. He considers the most notable to be the home of O. D. Scruggs, Jr. in the residential field, and the office of the Elizabethtown Electric System in the commercial field.

The Scruggs home in the Shepherd Hills section of Chattanooga is cooled and heated by a 5-ton Weathertron unit, located in the garage under the house.

The house is somewhat unusual, Hagmann said, in that it has a deceptively large appearance. Although it contains only seven rooms, it is long and narrow and two stories high.

It has a broad portico in front graced by tall, two-story Doric columns, giving it the appearance of a large southern mansion. All rooms extend the complete depth of the house.

But despite these peculiarities, he said, the Weathertron has been doing a good job of maintaining a steady, comfortable temperature winter and summer. The unit was installed in the spring of 1952 when the house was built. It has now been through two summers and a winter and the owner has had good experience with it, he said.

The Elizabethtown installation consists of four 5-ton units and provides both heating and cooling for the office areas. The installation cost about 20% more than competitive equipment, he said, but the company has saved the difference in operating costs in two years.

## FAR-AIR announces 1st high-low velocity 1" filter

### HOLDS 7 TIMES AS MUCH DIRT AS OTHER 1" FILTERS

Filters half again as much clean air because of 50% greater capacity  
Gives sustained efficient performance with low pressure loss  
Can be used at either high or low velocity



Here at last is a scientifically designed, proven, ruggedly built, all metal, high velocity 1" filter. It is no longer necessary to make extensive never-ending replacements... or put up with poor performance as ordinary 1" filters approach the useless point.

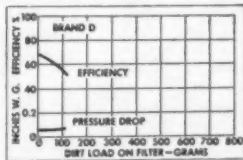
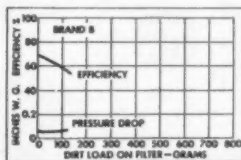
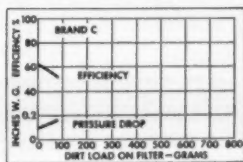
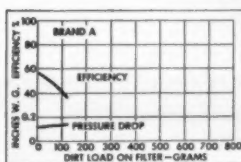
Based on the famous Far-Air herringbone design, this new gabled-cripp 1" filter is actually as efficient as most 2" types. Quantitative tests prove it's the best 1" filter on the market. It holds up to 800 grams of Standardized Fine Air Cleaner Test Dust before cleaning is necessary. Compare the curves—see for yourself it holds 7 times as much dirt as other brands. Far-Air 1" filters load progressively—like our 2"—and give you high efficiency air filtration without critical pressure loss right

up to cleaning time. Cleaning is simple and easy. With reasonable care your Far-Air filters will last indefinitely.

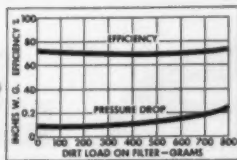
This new-type filter opens up new and exciting possibilities in many fields. Design engineers can now get higher quality performance in 1" frames. Equipment manufacturers can attain greater efficiency and economy in their products with 1/2 less space for filter units. Service organizations need make fewer calls to maintain safe, dependable air filtration for their customers.

Eliminate the wasteful expense of inefficient filters—save time and trouble—get better air filtration at lower cost. Write today for complete information. Farr Company, P. O. Box 10187, Airport Station, Los Angeles 45.

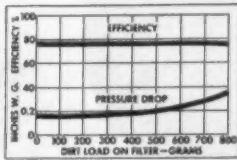
### COMPARATIVE PERFORMANCE



NEW FAR-AIR 1" FILTER AT 800 CFM



NEW FAR-AIR 1" FILTER AT 1200 CFM



ALL CURVES BASED ON 20x20x1" FILTERS

Better by FARR  
Better buy FARR





## Does It Pay To Buy a Side of Beef?

### NFFLI Objects to Swift's Statement That It Does Not; Locker Operators Asked To Protest

ELIZABETHTOWN, Pa.—The National Frozen Food Locker Institute has accused Swift & Co. of making "misleading and untrue" statements in an "attack on the locker plant method of marketing meats."

The statements in question appear in a meat promotion booklet entitled "Meats for Home Freezers," published recently by the large meat packer. They attempt to show that "it does not always pay to buy a side or quarter of beef."

In a letter of protest to Swift, Robert L. Madeira, executive secretary of the institute, said the company has "done both the frozen food locker industry and the home freezer industry a great disservice" by including the statements in the booklet.

#### SPEAKS AS LOCKER OPERATOR, TOO

The letter was addressed to Henry Schumacher of Swift's merchandising service. Madeira explained that he was writing not only as NFFLI's executive secretary but also as the owner and operator of Iceland, Inc., a locker plant in Elizabethtown.

"For years," he wrote, "my locker plant has depended upon the Swift plant in Harrisburg for its supplies of sides, quarters, and wholesale cuts of beef, pork, lamb, and veal for resale to a growing number of locker and freezer patrons."

"The Swift salesman who calls on us has frequently indicated that the volume of meat that we purchase exceeds the total meat purchases of all other Swift meat retailers in the community. I am sure that this situation exists in thousands of other communities across the nation where the 11,000 members of our industry are located."

"Recently I came across your Sales Plan booklet Number 116 entitled 'Meats for Home Freezers.' This publication . . . contains some very good information but I am disturbed by several items that appear in it. 'On the ninth page of the booklet you deal with the subject 'Buying Meats for Your Freezer.' Included are the following statements:

#### SWIFT'S STATEMENT

"A side of beef is not all meat! Why buy what you don't use? The facts given here show that it does not always pay to buy a side or quarter of beef even when the cost per pound would indicate that you are getting a bargain."

"Then you present the yield from a cutting test on a 299-lb. side of beef. You summarize by stating: 'Of the 299 lbs., 69 1/4 lbs. were suet, bone, and cutting shrinkage. That's 23% of the total weight. So why buy what you don't use?'"

"I must confess . . . I was stunned when I read this page. Here am I, a good customer of Swift & Co., reading meat sales promotional material designed specifically to combat the very sales technique that has enabled us to become volume sellers of Swift's products."

"While your attack on the locker plant method of marketing meats was bad enough in itself, I felt even worse when I realized that your presentation is misleading and untrue."

"You purported to show that 'it does not always pay to buy a side or quarter of beef' and then you fail to do so by setting forth a yield chart which includes no dollars or cents figures but simply shows pounds and ounces. How can you possibly prove dollars and cents savings when

you include no dollars and cents figures?"

"Your material is further misleading in that it implies that consumers do not pay for the fat and bone trimmings from meats when buying them in retail cuts but that they do pay for these trimmings when purchasing wholesale cuts."

#### RETAILERS INCLUDE WASTE

"This is simply not true. Retail stores must and do include the cost of fat, bone, and waste trimmings which occur during the fabrication of retail cuts in the final price per pound of each cut of meat."

"Whether the consumer purchases meat in wholesale cuts or in individual retail cuts, therefore, he is paying for the fat, bone, and waste trimmings."

Madiera told Schumacher the letter was being sent in bulletin form to every locker operator in the country, to the leading home freezer manufacturers, and to the Federal Trade Commission.

Full text of the letter was reproduced in NFFLI's December bulletin, which urged locker operators to protest the matter to their Swift salesmen or directly to Schumacher. Copies of the Swift booklet are available from the institute.

## Dealers, Markets Join In Food-Freezer Promotion

SYRACUSE, N. Y. — Four appliance dealers in this area—Gene's Appliance Center, M. Goldberg & Sons, Heuber Supply Co., and M. H. Williams Co.—recently joined with the P & C Food Markets in a co-operative food-freezer promotion.

Consumers were urged to pay for their freezer while they use it and pay for their frozen food while they eat it. "It's as easy as A, B, C," said a newspaper advertisement launching the promotion.

"A. Take the dollars you are spending for food alone to—

"B. Purchase a home freezer, then—

"C. Stock it with six months' supply of food from your P & C Food Market, and not measurably increase your food costs."

Copy added: "Take advantage of P & C's get-acquainted quantity purchase food discount to save, and Frigidaire's easy terms on both freezer and food. Be sure to buy P & C's food specials each week and get some extra each time . . ."

## Arthur Nelson Appointed Plant Manager of Orley

DETROIT — George Orley, president of Orley Corp., announces the appointment of Arthur E. Nelson as plant manager.

Nelson was formerly director of manufacturing for Ironrite, Inc. For some years prior to that he was a procedure and management consultant for various manufacturers. He spent 23 years with Ford Motor Co. and was a plant superintendent when he left.

In his new capacity, Nelson will have complete charge of plant operations, including the new paint spraying equipment and other new machinery recently installed, according to George Orley.

## St. Louis Firm Named as Amana Freezer Distributor

AMANA, Iowa—ARA Distributing Co., St. Louis, has been appointed distributor for Amana freezers in the eastern half of Missouri and southern Illinois, it was announced recently by E. L. Hinchliff, sales manager of Amana Refrigeration, Inc.

Heading operations for ARA are Harvey Frolichstein, president; Milton Rimmel, general sales manager; Pat Moore, service manager; and Frank Doyle, sales promotion and advertising manager.

Eight wholesale salesmen will present the new Amana line to dealers.

The new distributor's showroom and salesrooms occupy a three-story, 200-ft.-front building.

## Sears Stages Home Freezer Carnival as Sales Booster

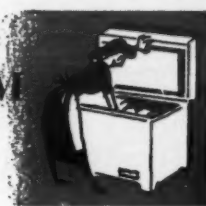
ROCHESTER, N. Y.—Home freezer business gained impetus at the Sears Roebuck & Co. store during a "Freezer Carnival" promotion that featured special prices on a variety of models and other drawing cards.

A ham was given away every day during the Carnival. Free ice cream was given to adults and the children with adults. A special refreshment stand also was set up in the department, serving hot dogs and pop, and manned by a local church society.

Customers were given their choice of bonus frozen foods with each freezer purchase.



## HOME & FARM FREEZERS



## All-Electric 'Wonder Home' Opened Near Phoenix

SCOTTSDALE, Ariz. — Arizona's first completely equipped all-electric home was opened at Scottsdale, outside of Phoenix, in December.

Called the General Electric "Wonder Home," the house is one of a series being sponsored by G-E around the country to demonstrate the ease and practicability of integrating modern electrical equipment into the home.

The six-room, 1,800-sq. ft. Scottsdale house incorporates a General Electric 5-hp. Weathertron (heat pump), a complete kitchen and laundry, electric water heater, freezer, light conditioning, remote control wiring, and 200-amp. Trumbull service entrance with circuit breakers. Counter tops in kitchen and bathrooms are made of G-E's "Textolite" plastic surfacing material. Provision was made for use of television and radio receivers and small appliances.

Total capacity of the electrical facilities represents a maximum load of approximately 54 kw.

The house was designed especially for the Phoenix area by local archi-

tect Ralph Haver; decorated and furnished by Mehagian's, large local furniture store and G-E dealer. Valley Sales & Service, Inc., G-E dealer in Scottsdale, made the complete electrical installation.

Located at Sundown Ranch Estates, approximately 20 miles out from the center of Phoenix, the house attracted 6,500 visitors on opening day. It will remain open through Jan. 17.

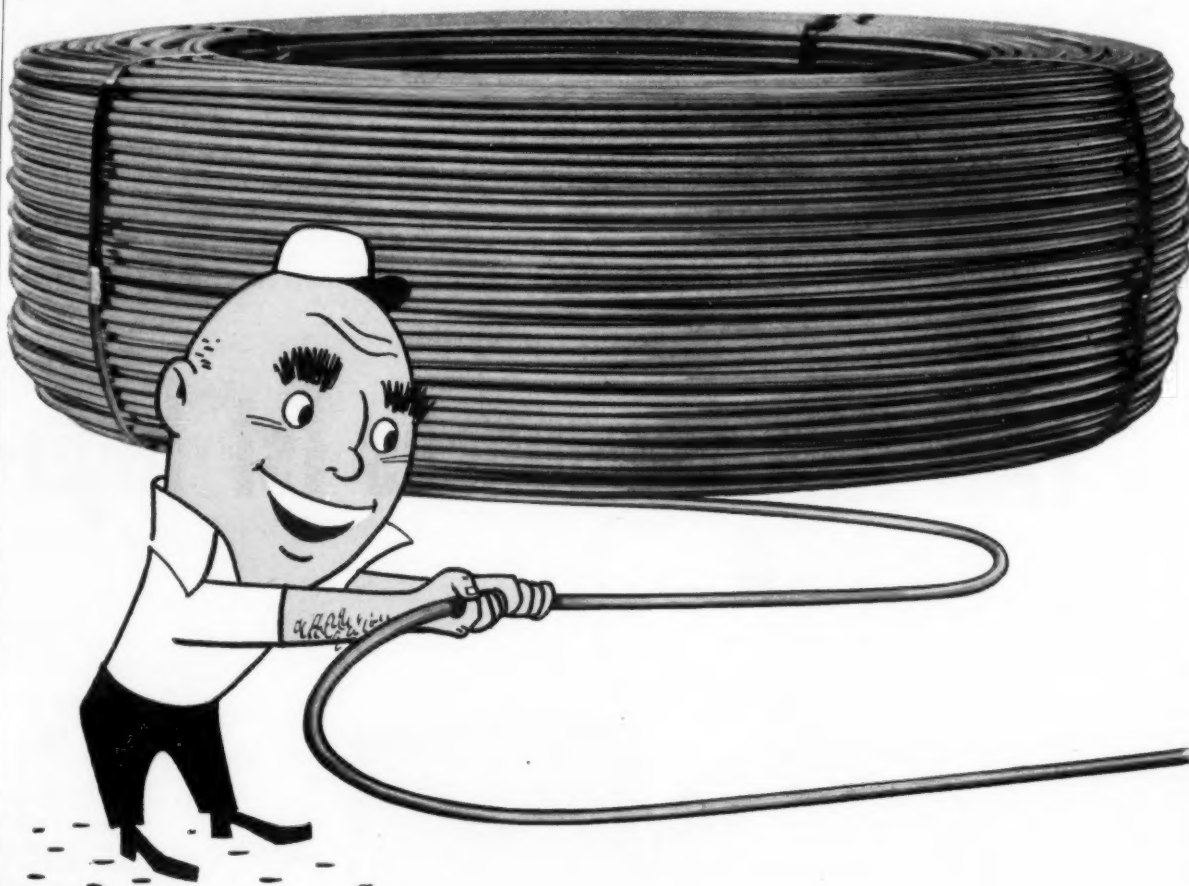
## Food from Paris-Maxim's Freezes, Ships 6 Dinners

NEW YORK CITY — You don't have to fly to Paris to enjoy food from Maxim's, famous French cuisine.

Altman's here is offering six continental menus prepared and frozen in Maxim's own kitchen and sent direct to New York.

Each meal is frozen in an aluminum foil dish which can be placed in the oven to heat. Entrees include lamb, veal, beef, and fish dishes prepared in wine sauces. Prices range from \$3.25 to \$4.65 depending on the entree.

Altman's introduced the menus with a one third page advertisement and offered a delivery service at additional cost.



## From fabrication to finished product... Bundyweld brings you real peace of mind

### WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of copper-coated steel. Then it's . . .



continuously rolled twice around laterally into a tube of uniform thickness, and passed through a furnace. Copper coating fuses with steel. Result . . .



Bundyweld, double-walled and brazed through 360° of wall contact.



NOTE the exclusive Bundy-developed beveled edges, which afford a smoother joint, absence of bead and less chance for any leakage.

Bundy Tubing Distributors and Representatives: Bridgeport, Conn.: Korhumi Steel & Aluminum Co., 117 E. Washington St. • Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lapham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Los Angeles 58, Calif.: Tubasole, 5400 Alcoa Ave. • Philadelphia 3, Penn.: Ruffin & Co., 1717 Sansom St. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4755 First Ave., South • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 181 Fleet St. East. Bundyweld nickel and Monel tubing are sold by distributors of nickel and nickel alloys in principal cities.



## DEAN COLD PLATES

ANY SIZE  
ANY SHAPE  
MOST METALS

Write for  
Technical  
Data Book

COLD PLATES FOR: Ice Cream Cabinets, Soda Fountains, Farm Milk Coolers, Farm Freeze Cabinets, Window Displays, Food Counters, Sub-Zero Applications for Industrial chilling.

DEAN PRODUCTS, INC.

1042 DEAN STREET, BROOKLYN 16, N.Y.  
STERLING 9-3400



## Hotpoint Launches Its 1954 Program with 'Tell 'em, Sell 'em, Show 'em Theme'

### Store Identification Plan Includes Lighted Signs For Interior and Exterior

CHICAGO—An appliance merchandising program with the 1954 keynote theme of "Tell 'em—Sell 'em, and Show 'em" employing the latest methods and techniques of advertising, sales promotion, and sales training, has been announced by Hotpoint Co. to its dealers and distributors, according to Clifford C. Gramer, merchandising manager.

A new store identification program will be launched this year for dealers by the sales promotion division of merchandising. The program includes three exterior illuminated signs and three interior illuminated signs, Lee DiAngelo, sales promotion manager, said.

Exterior signs include a 12-ft. vertical double-faced sign, a 6-ft. horizontal double-faced sign, and a 12-ft. flat wall sign. Two of the signs have space for the dealer's name.

A new in-store display is a new pegboard background. It is 7½ ft. tall and 4 ft. wide.

The pegboard display is so designed that any Hotpoint appliance can fit into the bottom of it. At the top of the display there is a sign and below the sign there is the pegboard. The dealer can use this pegboard for pegging sales promotion



LEE DIANGELO, sales promotion manager, Hotpoint Co., points out some of the new 1954 sales promotion ideas for Hotpoint dealers in the new "Tell 'em—Sell 'em, and Show 'em" program. (L. to R.) New ironer display invites prospect to watch TV while she irons, also shows how easily Hotpoint's new portable ironer folds up and rolls away. The stand and chair make excellent premiums. "Happy Hotpoint" highlights top features of 1954 Hotpoint refrigerators (center) as he rotates around the illustration of the world in a new action display. Other features of the new 1954 refrigerator line are listed by an attention-getting flasher light. (Far Right) Ozzie & Harriet Nelson, radio and TV stars of the Hotpoint Co. sponsored "Ozzie & Harriet Show," star in a new 39-in. electric range display. Product features are listed under full color, flasher lighted food illustrations.



literature on it to better illustrate product features.

On the other end of the display, there is a card holder in which product identification cards can be slipped in to show product features. The display can also be used for advertising reprints, draping of one of three racks, making an island display in the center of traffic, or several can be used for show window display featuring several products.

### RANGE DISPLAY IS MOTOR DRIVEN

A new range display designed especially for the newly introduced 30-in. range line, is a motor driven, self-illuminated cardboard display printed in full color. It fits onto back-panel of the range and shows the features of the particular models.

A self-illuminated cardboard display featuring Hotpoint's Ozzie and Harriet Nelson of the radio and TV show is available for the 39-in. range line and fits onto the back panel of the ranges.

A special crown display which fits atop the 1954 refrigerators will also be offered to dealers. Three motor driven "Happy Hotpoint" figures, each carrying a feature of the refrigerator, rotate in full color. The display has a flasher-lighted background which lists additional features of the refrigerator.

Three of the series come in ad sizes of 20 in., 30 in., and 48 in., while the last ad series is in one size, 3 in. by 2 in. column, allowing for frequent small space insertions.

Other features of the mat book include ads utilizing high style techniques, grease pencil techniques, and black reverse. Service ads, product illustration ads, radio announcements, TV films, and movie commercials are also included in the book. The last section is devoted to types of outdoor billboard displays.

### Turkeys as Door Prizes Pull Good Traffic

JAMESTOWN, N. Y. — Caprino's Appliances pulled good traffic during an automatic washer and dryer promotion in which the store offered 10 turkeys as door prizes.

Another feature of the promotion was free transportation. Any woman needing transportation could call the store and have a car pick her up. She also was returned home by automobile, at no cost.

Three flower pots, specially prepared potting soil and a package of flower seeds were given to each woman witnessing an automatic washer and dryer demonstration in the store, put on by a trained home economist.

### 'FEATURE FOLIO' REPUBLISHED

Sales training material included in Hotpoint's 1954 merchandising program are revamped sales development kits using suggestions obtained from dealers and distributors during 1953 as to better methods and selling ideas for dealers.

"Feature Folio," used last year by dealers to describe the 10 outstanding features of each Hotpoint appliance to the consumer, will again be published for dealers. Added features this year will include product dimensions for use-value in planning kitchens.

More demonstration ideas, selling techniques, and timely facts about Hotpoint appliances will be featured in the 1954 Spotlight Sales Bulletin for dealers.

### 'DESIGN FOR TOMORROW' MOVIE SHOWS NEW PLANT

Another sales training tool in full color is a 25-minute movie entitled "Design for Tomorrow" which shows the "world's most modern refrigerator plant" recently opened by Hotpoint. While primarily for distributors, the movie can be used by dealers to show customers in their store or local movie house. The movie takes the customers through the refrigerator plant and shows how refrigerators are built from sheet steel to the final product.

Another sales training tool which can be used to show customers how the Hotpoint refrigerator is made is a 24-page booklet also entitled "Design for Tomorrow." Dealers can pass the booklet out to store customers when they inquire about a refrigerator.

According to D. D. Thompson, manager of sales training for Hotpoint, more sales training tools will be forthcoming for 1954 to better train dealers to sell more appliances.

### ADVERTISING PLANS

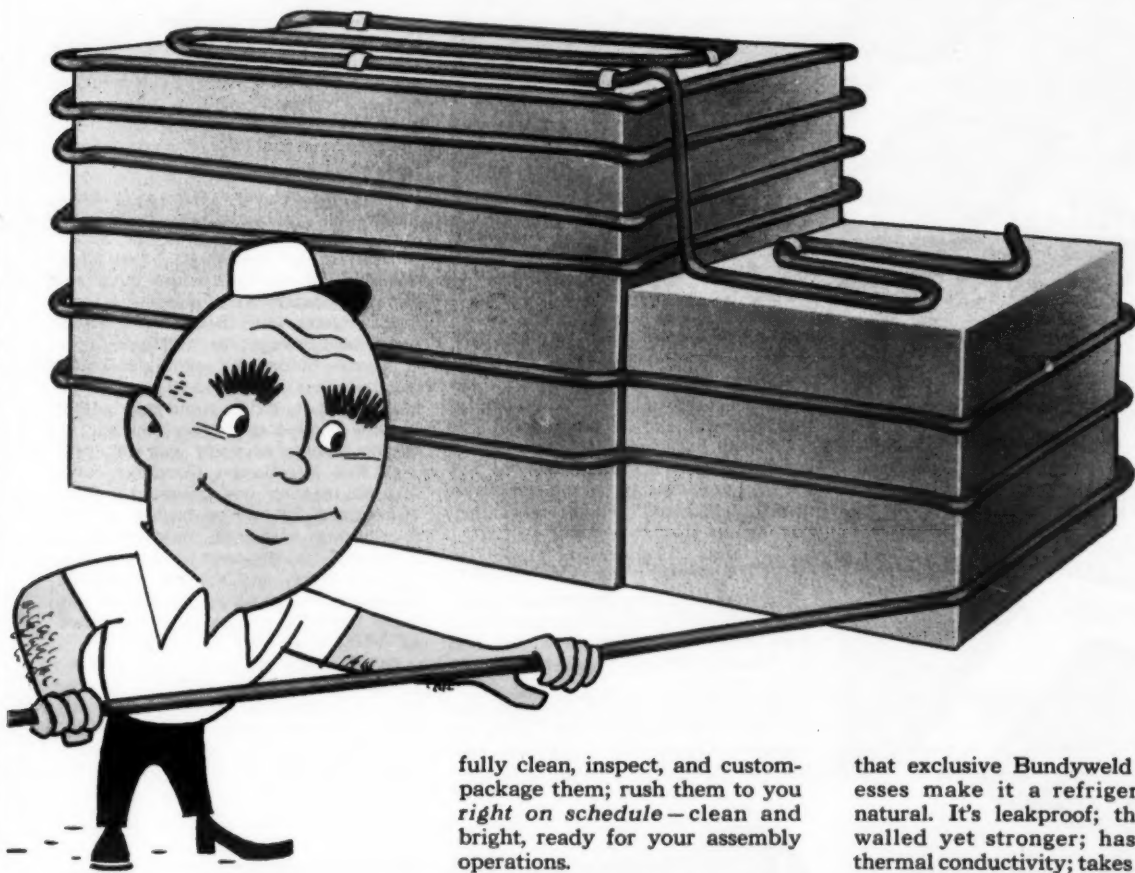
Advertising to help dealers move appliances will be spearheaded by ads in Sunday supplements sections. This is the first time Hotpoint has campaigned in these sections.

According to Gordon G. Hurt, advertising manager, the 1954 program will be highlighted by 10 full color spreads in *Life* and *The Saturday Evening Post*. Follow-up ads will appear in *Ladies Home Journal*, *Better Homes and Gardens*, *American Home*, and many others.

A full trade magazine program will precede this consumer schedule by 30 to 60 days.

Hurt also said that many new TV stations will be added for greater audience reception of the company sponsored Ozzie & Harriet Nelson show. New radio-spots have also been prepared for local dealers to use.

The new newspaper ad kit will include, for the first time, four new styles of ads for local dealer use.



You'll get rid of most of your tubing headaches, gain real peace of mind when you specify dependable Bundyweld Tubing for your condensers, compressors, evaporators, refrigerant lines, other tubing parts. Here's why:

**If you do your own fabricating**—whether you use coils up to 4000' long or straight lengths, you'll get clean, bright, ready-to-use tubing, shipped on time, exactly as specified.

**If you require fabricated tubing parts**—we're geared to produce them to your requirements; care-

fully clean, inspect, and custom-package them; rush them to you right on schedule—clean and bright, ready for your assembly operations.

**If your tubing designs are simple or complex**—we're ready to turn them out as quickly, accurately, and economically as possible. Whether your designs call for serpentine coils, swaging, flattening, expanding, brazing, saddle jointing, bending to small radii, piercing, upsetting, slotting, threading, angle cutting, notching, flanging, flaring, reducing, tapering, other fabrication operations, or combinations of the above, we offer you the industry's most versatile fabrication facilities.

**If your product requires absolutely reliable tubing**—you'll find

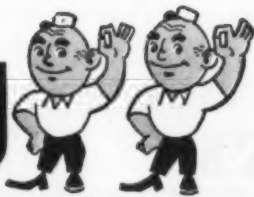
that exclusive Bundyweld processes make it a refrigeration natural. It's leakproof; thinner-walled yet stronger; has high thermal conductivity; takes easily to standard protective coatings.

**If you need engineering assistance**—our skilled engineers will draw upon their years of experience to help solve your tubing problems, perhaps show you ways to cut fabrication costs and save on materials, too. Whether you fabricate your own parts or wish Bundy to do the job, you're welcome to use our excellent engineering services. Call, write or wire us for information or for assistance on your tubing problem.

**BUNDYWELD TUBING COMPANY  
DETROIT 14, MICHIGAN**

# Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

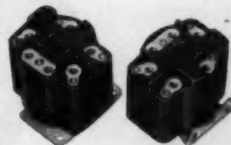


### A COMPLETE LINE — Designed to Your Requirements



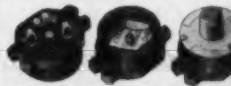
### SERIES RELAYS

Balanced armature—Can be mounted in any position.



### POTENTIAL RELAYS

Precision snap-action contacts. Convenient terminal board wiring. Totally enclosed.



### OVERLOAD PROTECTORS

Patented bi-metal snap-action—Inherent protection. Large solder terminals. Manual and automatic.

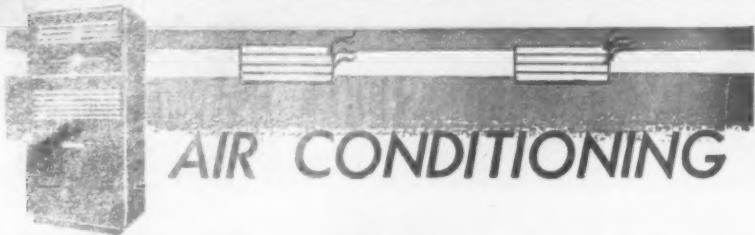
Let R-B-M engineering and production facilities serve you. Phone 5121 or Write Dept. M-1.

**R-B-M DIVISION  
ESSEX WIRE CORPORATION**  
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Controls for Electronic, Refrigeration, Industrial, Appliance, Communication and Automotive Industries.





### Contractor Meets a Challenge

## Order Called for 75-Ton Air Conditioning Job To Be Installed, Running In 30 Days

DETROIT—When a salesman for Atmospheric Control Co. came into the boss's office with an order for a 75-ton air conditioning job for one of Detroit's major automobile factories, the boss, Harry Levine, was quite pleased until . . .

The salesman said, "the job has to be in and running within 30 days, or we don't get the order."

Levine, who's been an air conditioning contractor here for nearly 20 years, at first thought that would be utterly impossible.

"Why a job that big would normally take at least five months, time you ordered the equipment, got it delivered, installed, tested, and turned over to the owner," he explains.

Besides, the specifications called for totally enclosed motors and "J.I.C." starters (the highest quality type), both of which are normally much harder to get than standard equipment. And in addition to a 75-ton compressor, the job required

a 75-ton evaporative condenser, water chillers, and pump.

"It seemed absurd even to think about trying to do it in 30 days, but the auto company insisted they needed it for a quality control room on government contract," Levine recalls.

"So we got on the phone and made about two dozen calls, local and long distance, to see what we could find.

"To our amazement we found a 75-ton compressor and condenser complete with unloader and controls in a Detroit warehouse waiting to be delivered to a plant then on strike. A further check revealed that settlement of the strike appeared nowhere in sight, so we prevailed on the agent to sell us this compressor and order another for the struck plant.

"Then the thought occurred to us that if a big compressor had been ordered there must be cooling equipment to go with it. We found that a shell and tube chiller and a cooling tower as well as the pumps were all

scheduled to be delivered to the same struck plant within a week.

"Our customer was willing to accept a cooling tower instead of the evaporative condenser originally called for, so we arranged to buy all this equipment for the job, too.

"Then we called a large motor manufacturer who does a lot of business with this auto company. We had discovered the motor people maintained an emergency stock for this manufacturer. And so we obtained a 75-hp. totally enclosed, ball-bearing motor from this stock.

"The starter was similarly located and delivered from an emergency stock.

"Of course," Levine points out, "we also had to get control items, valves, fittings, strainers, etc. Much of this came from our own stock and the balance from local wholesalers."

The installation itself involved some rather complicated rigging, Levine adds.

"Although we didn't actually finish the job in 30 days, we were ready to test it by that time. By the next week, though, the job was running.

"This has never happened in all my years in the business and it probably will never happen again," he thinks.

But Levine has certainly chalked up one record for the books.

### Leases Space To Make Ducts

PHILADELPHIA—Two floors containing 8,000 sq. ft. of floor space at 1207-09 Callowhill St. were recently leased to Supreme Metal Works Co. for manufacture of air conditioning ducts and other equipment.

## Appraisal of Heat Pumps

Successful Applications Show No Other Modern Development Has Made as Much Progress In Short Time

WASHINGTON, D. C.—"No other development in modern times—the automobile, telephone, radio, and many others—has made the progress in seven years that the heat pump has accomplished since the war," contends H. E. Voegeli of American Brass Co.

He presented "A 1953 Appraisal of Heat Pumps" as one of the four talks in a heat pump symposium held by the American Society of Refrigerating Engineers during its 49th annual convention at the Shoreham hotel here recently.

The other discussions included: "A Thermodynamic Study of Vapor Compression Heat Pump Cycles" by Prof. J. L. Threlkeld of the University of Minnesota; "Sizing Earth Heat Pumps for Three Different Latitudes," by Prof. E. B. Penrod of the University of Kentucky, and "Heat Pump Performance in Western Pennsylvania," by C. L. Goodman of West Penn. Power Co.

Moderator of the discussion was Prof. C. H. Coogan of the University of Connecticut.

### DEVELOPMENT TRACED

Briefly tracing the development of the heat pump, Voegeli paid tribute to the activities of several manufacturers since the war in promoting the device.

"There is definitely going to be progress, but the main question is—in what direction?" he commented.

Pointing out that "all heat emanates from the sun," Voegeli declared that "storing heat of the summer is within the realm of possibility." He described an installation in his own home which includes ground coils, a solar heater on the roof to pick up heat from the sun, and even coils to obtain heat from the compost pile in the garden.

In his installation Voegeli also heats and cools the fireplace and chimney, the cool mass of relatively porous masonry serving to condense and absorb moisture from the air during the summer, he explained.

Voegeli implied that the heat pump ultimately may depend for its source of heat on a solar heater "that follows the sun around like a sunflower and will really let you do something for yourself."

Present designs of the vapor-compression heat pump cycle do not require any change to improve efficiency, indicated Prof. Threlkeld, reporting on thermodynamic studies.

### REFRIGERANTS SATISFACTORY

Refrigerants now commonly available are also quite satisfactory, and here Prof. Threlkeld gave the nod to "Freon-11" as "theoretically the most efficient."

Although "Freon-12," he said, was the least efficient, in theory, of several common refrigerants, he pointed out that all ranked high in these studies.

It was also suggested by Prof.

Threlkeld that consideration be given to multiple stage condensing "when a fluid must be heated through a considerable range."

"Two-stage condensing will improve the coefficient of performance as much as 37% over single stage, while four-stage condensing will increase the c.o.p. by 64%," he declared.

### SIZING METHODS OFFERED

A somewhat complicated mathematical approach to the problem of sizing heat pump systems employing ground coils was outlined by Prof. Penrod, who showed how he had arrived at data for the three latitudes represented by Lansing, Mich., Lexington, Ky., and Atlanta.

"The earth type heat pump," he asserted, "is feasible as far north as Vancouver—with supplementary heat. Ground coils are okay in city lots as small as 30 by 50 ft. if the system is properly designed and installed."

He reminded the group also that early fears of "too many heat pumps in a city freezing the ground in winter and overheating it in summer" were unfounded.

Successful applications of heat pumps using well water in the western Pennsylvania area were described by Goodman, who pointed out that "we probably have the greatest percentage of overcast of any part of the country in our area and with 0° being an optimistic design temperature, we can't depend on air as the heat source."

First attempt at a heat pump in that area was made in 1946 when a system involving a 3-hp. compressor and a 65-ft. well was provided for a nine-room house with a calculated heat loss of 60,000 B.t.u., Goodman said, adding that the system wasn't satisfactory.

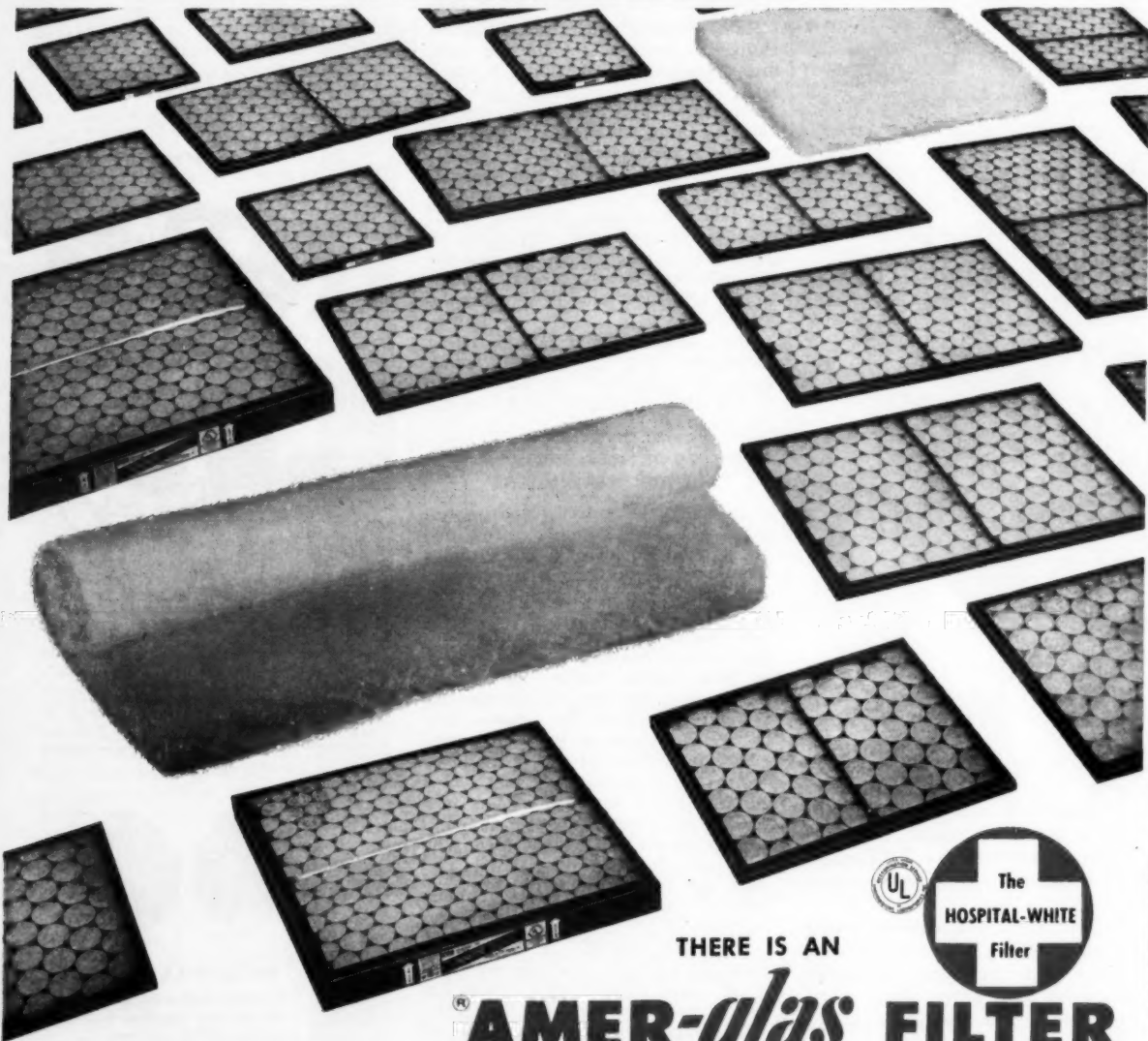
### RESISTANCE HEATERS NEVER USED

"The same equipment was later installed in another house with resistance heaters as a supplementary heat source, but these have never been used except for testing."

Second house, he explained, was calculated at 47,000 B.t.u. loss. Later a 16 by 26-ft. living room was added to this residence, but no increase in the heat pump capacity was required.

Of this installation, Goodman commented that on one occasion it had maintained 72° F. or higher at the thermostat although outdoor temperatures had dropped to -13° F. two days running, and another time the compressor gained on the load one night when the temperature remained at -9° or lower for 11 hours.

"The cost of the heat pump," Goodman admitted, "is still greater than conventional heating, but it's also a good deal safer. I believe, however, that with the heat pump equipment now coming on the market the cost differentials will fade away."



THERE IS AN

**AMER-glas FILTER**

FOR EVERY AIR CONDITIONING NEED

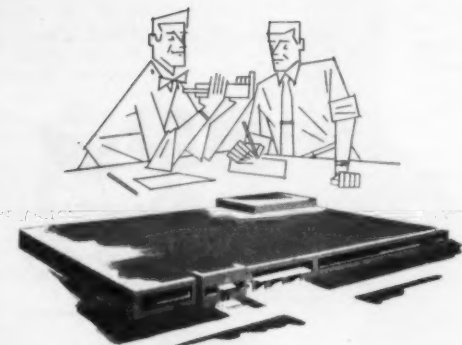
The filter in a modern air conditioning unit is required to handle a large volume of air, at high velocities and with a minimum of actual filtering media. It must offer minimum resistance to air flow, yet have maximum dirt catching power. Filtering is important . . . so important that consumers rate it next to cooling.

Don't take chances. Use the filter that more and more manufacturers are using as original equipment in today's improved air conditioners. Insist on AMER-glas Air Conditioning Filters, the filter that was developed especially for air conditioning units by American Air Filter Company, the acknowledged leader in air cleaning equipment . . . with over thirty years' experience devoted exclusively to air filters. AMER-glas filters are available anywhere, in a complete range of sizes and styles.

*You can expect the best from*



AMERICAN AIR FILTER CO., INC., Louisville, Ky.  
100 Central Avenue



FILTER PROBLEMS SOLVED HERE

American Air Filter maintains a testing laboratory and a complete staff of filter experts at their new AMER-glas plant. Whether you have a filtering problem, or a problem filter, why not call on the leader in filters for air conditioning units.

**LAU** MAKING BLINDS, SHUTTERS, AND OTHERS

**If you are designing a product requiring bearings . . . consider**

**LAU Series "A" Bearings**



A self-aligning, self-oiling bronze bearing. Held in the housing under uniform spring pressure, it remains self-aligning at all times. Bore sizes from 3/8" thru 1". Noted for high performance and long life.

Write for Catalog Page 707-14

**THE LAU BLOWER COMPANY**  
DAYTON 7, OHIO  
World's Largest Manufacturers of Air Conditioning Blowers





## ROOM COOLER NEWS

### Combination Deal

## Window Units Combine with 'Packages' For Flexible, Space-Saving Arrangement

NEW YORK CITY—One of the largest industrial equipment export organizations in the United States has solved the problem of air conditioning its six-story midtown New York City office building by installing a system of 12 separate packaged units with a total cooling capacity of 30 tons.

The Rocke International Corp. building, at 13 E. 40th St., between Fifth and Madison Aves., is flanked by two taller buildings with which it has common side walls.

The problem was to design a system that would (1) provide flexible operation so that the various departments could be cooled independently, (2) occupy a minimum of valuable floor space, (3) be installed with the least possible disturbance of normal business operations, and (4) include suitable provision for fresh air intake.

Five of the Rocke building floors are occupied by executive, sales, and engineering offices while a printing and mailing plant for its promotion department occupies another full floor. Four of the office floors are divided into larger front office areas and smaller rear sections.

Two and three-ton United States Air Conditioning Corp. upright packaged air conditioners and 1 and 1/2-ton window-type room air conditioners were installed in various combinations to provide the proper amount of cooling for each of the five office floors. Each unit is located in the space it serves and operates independently under the control of a room thermostat.

The larger packaged units have been placed adjacent to a central air shaft, from which fresh air is introduced. Fresh air is also introduced directly through the window-type equipment, which has been utilized only in the rear of the building.

The promotion department is cooled and heated by a 7 1/2-ton UsAirco upright unit, equipped with a steam coil. This conditioner has been placed in a closet from which air is distributed by a duct system.

A single cooling tower on the roof recirculates condensing water to the packaged upright conditioners.

Installation of equipment for the office floors involved only three op-

erations—placement of the equipment, addition of new vertical piping runs for water supply, drain and cooling tower connections, and short duct runs to the air shaft.

The particular location of the equipment in each office area permitted this work to be done without interference with regular personnel. In the promotion department, the duct installation work was divided into two stages so that at least half of the floor was available for normal operations at all times.

## Macy Ad Offers Free Installation of Units Ordered Before Feb. 1

NEW YORK CITY—Macy's department store here is offering free installation of 1954 General Electric room air conditioners purchased or ordered by Feb. 1.

The offer was announced in a full-page newspaper advertisement which stated:

"Save \$35 right now because you pay nothing extra for installation in standard size, double hung window (casement style excepted)."

Readers were also advised that they can order now and Macy's will hold their air conditioners for 90 days if desired.

Other copy said: "Thousands of New Yorkers shopped at Macy's for air conditioners last summer! Late comers had to wait . . . others missed out entirely. All had to pay for installation. Now Macy's beats the season . . . Buy General Electric 1954 air conditioner now . . . and Macy's will install it free."

## Saturation Mailing Kicks Off Fresh'nd-Aire '54 Room Cooler Drive

CHICAGO — A mailing piece in color advising, "Don't . . . place your air conditioning order 'till you see . . . Fresh'nd-Aire's new 'Electromagnetic' pushbutton automatic all-weather air conditioner," has been sent to more than 100,000 distributors and dealers throughout the United States.

The mailing recently was completed by the Fresh'nd-Aire Co., a division of the Cory Corp. It went to all Cory and Fresh'nd-Aire distributors, all appliance dealers and all hotels, motels, and institutions throughout the United States.

This saturation mailing marks the beginning of Fresh'nd-Aire's extensive 1954 national promotion to make retail appliance dealers as well as all commercial users of air conditioners aware of the new and different Fresh'nd-Aire "Electromagnetic" room air conditioners. It is to be followed by national advertising in over

50 trade and consumer magazines in addition to a continuing direct mail campaign.

Each inquiry is answered immediately with additional information about the 1954 Fresh'nd-Aire air conditioners. Arrangements have been made so Cory territory managers will turn all inquiries from dealers and commercial users over to Fresh'nd-Aire distributors for further contact.

## McCarty Joins Lassiter Sales, Remington Rep., As Firm Associate

RICHMOND, Va.—The W. H. Lassiter Sales Co., representative for Remington Corp. room air conditioners, has announced the appointment of Allen N. McCarty as an associate.

Before joining the Lassiter organization, McCarty was vice president and general manager of the DuVal Distributing Corp., Richmond appliance distributor. Prior to this position, he was sales manager for the white goods division of the Commonwealth Sales Co., also of this city.

# Only MITCHELL protects inventory with this revolutionary Dealer-Distributor Protection Plan

FOR ROOM AIR CONDITIONER DEALERS

with this revolutionary

Dealer-Distributor Protection Plan

only D. D. P. protects you against cool summers and removes the risk of inventory devaluation!

## HERE'S WHAT THEY'RE SAYING ABOUT THIS OUTSTANDING PLAN THAT'S LIKE WEATHER INSURANCE



Ray Ade, Distributor, Graybar Electric Company, reports: "Revolutionary! . . . a plan to offset unpredictable weather conditions will keep Mitchell dealers in a sound position at all times!"



D. L. Kissell of H. L. Kissell Refrigeration Co., standing with W. G. Franklin, tells him, "With all the sales advantages Mitchell offers plus the Dealer-Distributor Inventory Protection Plan Mitchell is one of my most valuable air conditioning franchises."



R. C. Hager, Distributor, Arnold Wholesale Corp., Cleveland, Ohio, adds: "New phenomenal merchandising ideas like this Mitchell Dealer-Distributor Inventory Protection Plan account for Mitchell remaining first in sales."



J. Temple Fraker, Distributor, Fraker Heating & Equipment Co., Knoxville Tenn., tells E. A. Tracey: "We'll handle the entire line. You can't lose out on extra inventory with Mitchell's new Dealer-Distributor Protection Plan."



George Anderson points to a D.D.P. form as Jim Burney, Dist., Corpus Christi, Texas, says: "Mitchell's D.D.P. is wonderful for inventory protection—invaluable to dealers and distributors who do not completely sell out because of an unpredictable season."



Jack B. Polloch, President, and H. D. Nevill, Sales Manager, of South Texas Appliance Corp., Distributor, San Antonio, Texas, agree: "In normal weather Mitchell units are always a sell-out. Now with the Dealer-Distributor plan we are protected against a cool summer."



## WALL STREET JOURNAL REPORTS:

"A PROTECTION AGAINST COOL WEATHER SALES LAG"

MITCHELL MANUFACTURING COMPANY Dept. AC-3 2525 N. CLYBOURN AVE. • CHICAGO 14, ILLINOIS  
In Canada: Mitchell Mfg. Co. 19 Waterman Ave., Toronto, Canada

**Demand IS FOR**

**CLEANABLE WATER-COOLED CONDENSERS**

1/2 to 25-Ton Capacity

**MORE EFFICIENT DOUBLE-TUBE COUNTER-FLOW DESIGN**

"New unit" efficiency is always maintained with H & M water-cooled Condensers because they are *cleanable*—quickly, economically. Do as the industry does—demand nothing less, for the cost is no more. Write for Catalog.

WHOLESALE IN PRINCIPAL CITIES

**Halstead & Mitchell**

BESSEMER BLDG. • PITTSBURGH 22, PA.



## AIR CONDITIONING & REFRIGERATION News

Trade Mark registered U. S. Patent Office; Est. 1926.

F. M. COCKRELL, Founder

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JANUARY 18, 1954

## Good News! Inventories Lowest Since 1948

MOST NOTABLE development at the Winter Mart in Chicago was not the high-styled new products, exciting as many were. It was the discovery that inventories of refrigerators and freezers are at the lowest level since 1948.

This is true at the factory level and, most important, at the dealer level, too.

Dealers from all over the country—thousands upon thousands of them—trekked to Chicago to see the new models, and to boast about their "clean" inventory positions.

**Naturally this was good news** to manufacturers. What they produce in 1954 will move directly into the hands of customers, without having to compete with the carryover backlogs which have been so burdensome and worrisome in recent years.

Another development, in a backwards way, augurs well for refrigerators, freezers, and air conditioners. This was the almost universal fear of TV business in 1954. The advent of color television, dealers feel, will put a heavy damper on black-and-white TV sales. Color sets will be too few and too expensive to close the gap. Hence, dealers are planning to devote more floor space and selling effort to "white goods."

**Great enthusiasm was expressed** for room coolers, as might have been predicted. Somewhat surprising, though, was the even greater optimism voiced about the home freezer. Uprights got the Major Play. After taking big orders for a week, some manufacturers went so far as to predict that 1,500,000 freezers can be sold during the coming year.

From all we could see and hear at Chicago, business prospects for our industry appear to be solid indeed for 1954.

They'll Do It Every Time . . . Jimmy Hatlo



## Boom Is Over And He Is Glad

MERRITT FIELDS, executive manager of the Indianapolis Association of Credit Men, believes that the business boom of the last 14 years is over—and that it never was a good boom anyway!

Fields makes some pungent and pointed observations on the boom, the government, taxes, and the general state of the nation. Such as:

**"It is shameful** that it (the boom) ever happened. Those who are wetting the crying towels (because it is ending) should hide in shame, for this boom was based on war and spending for war. Only the hard, the soulless, the cynical would want such conditions to assure a high level of business and employment. . . .

"Well, whatever you made out of the boom just divide it by half—for the boom among other things gave us the 50-cent dollar.

"Our nation is badly hurt and it cannot recover unless the administration quits catering to the left and keeps its nose out of your business and ours."

Fields opines that it was a sorry day in 1917 when the United States ignored George Washington's advice and "budded into Europe's quarrels." We've been paying the price since in death, debt, and taxes, he says.

**"Talk about holdup men!"** he exclaims in print. "They get the headlines, but the real holdup is the government tax holdup, at the Federal, state, municipal, county, and lower levels." And on the subject of reported need for more credit—

"The whole nation, relatively speaking, is in hock up to its ears. What this country needs is not more credit and more debt—it needs less credit and less debt."

Fields propounds the theory that a minor depression, if that's what occurs will not be without its silver lining.

"It will cause a lot of folks to be a little bit afraid for their jobs—we've needed some of that badly for the last 14 years. . . .

"It will tend to cause turning in an honest day's work for a day's pay. . . ."

Amen!

## Thought Starters

The people of a little mountain village were divided on the plan for building a hospital, much needed because of accidents that occurred on a bad road nearby. As funds were low and the people poor, there were fiery speeches from both sides. Finally an elderly lady arose: "Friends, listening to all arguments, it seems the hospital is needed primarily on account of the bad place in our mountain road. I suggest we build up a danger sign and a guard rail to warn drivers. This will cost little and prevent much damage and suffering."

Everyone was quiet as the leader of the pros arose and conceded, "Why didn't we think of this before?"—H. O. NELSON.

History wouldn't repeat itself so often if the world would only listen.—*Country Gentleman*.

A job becomes work only when you worry about it.—*Argonaut*.

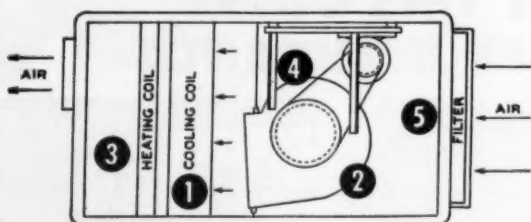
The new powers that science has given to man can only be wielded safely by those who, whether through the study of history or through their own experience of life, have acquired some reverence for human feelings and some tenderness towards the emotions that give color to the daily existence of men and women.—*BERTRAND RUSSELL, Science Digest*.

A better name for our free enterprise system would be the individual courage system.—*DR. J. OLLIE EDMUNDS, President Stetson University*.

## NEW FEATURES of PROVEN MERIT

**KRAMER**

## AIR CONDITIONING UNITS



### 1 MUGGY-AIR-CONTROL

It "squeezes" extra moisture from the air on muggy days without reheating, dampers or excessive cooling. No short cycling and uncomfortable conditions.

### 2 "BLOW-THROUGH" DESIGN

Fan-motor assembly always exposed to normal room temperatures. A unique design with many advantages, resulting in —  
No motor overload and no loss of bearing lubricant from hot air of the heating coils.  
No corrosion of fan-scroll assembly from moisture carry-over of the cooling coils.

### 3 ANTI-SWEAT CONSTRUCTION

Only a small portion of the casing is exposed to cooled air; that section is heavily insulated.

Access doors and grille have scientific anti-sweat designs.

### 4 QUIET OPERATION

The fans and motor form an integrated assembly independently rubber-mounted to the casing. All moving parts are completely isolated by rubber.

### 5 FOR FINISHED INTERIORS

Graceful lines with no unsightly belts, motor and guards exposed to view. Finished in hammer gray enamel.

MANY OTHER OUTSTANDING FEATURES.

WRITE FOR BULLETIN AC-238

**KRAMER TRENTON CO. • Trenton 5, N.J.**





## Room Coolers Do Better Job Than Packaged Units In Some Cases, Distributor Discovers

COLUMBUS, Ohio—A battery of room coolers can do a better job of air conditioning a small business establishment or office than a central system, maintains Bart Williams, air conditioning sales manager for the Gustav Hirsch organization here.

Williams claims that window units will take more moisture out of the air than a central system will, and will give better air circulation—all of which will provide more comfortable surroundings at less operating cost.

He pointed to two beauty shop installations his firm had made through the Barber & Beauticians Supply Co., local Hirsch dealer for the Fedders line, as examples.

Both beauty shops—Mary Lyons Beauty Salon on 4th St. and the 124 Beauty Salon just around the corner on E. Broadway in downtown Columbus—are long and narrow. They measure about 76 ft. long by 18 ft. wide.

### COOLERS FRONT AND REAR

In Mary Lyons, Williams installed two ¼-hp. Fedders window units over the front display window at ceiling level. Two more were installed in sash-type windows at the rear of the shop. The two in the rear were installed at waist and head level.

Thus, air from the front was blown to the rear at ceiling level—about 12 ft. from the floor. Air from the rear was circulated toward the front at about 3 ft. and 6 ft. respectively.

In 124, Williams handled the situation a bit differently. Here there were no back windows and the rear was closed off for storage space. So he put three ¼-hp. window units over the front window at ceiling level and the fourth in the transom over the door. A bar and chain arrangement supported this unit. All four units direct their air currents toward the rear.

Proprietors of both shops were very pleased with their installations and said they do a good job of removing heat, which is generated in quantity by a battery of hair dryers and wave setting machines. They declared that lack of floor space to accommodate a packaged unit was another strong factor in determining their selection of window type units.

### MOTEL MARKET GROWING

Another market for room coolers that Williams has tried to develop this year is among the growing number of motels springing up around Columbus. He says he has met with severe competition among other distributors in attempting to sell for this market and has been handicapped by inability to get ½-hp. units during the cooling season. Williams said that his firm had not received a ½-hp. room cooler from March to August. For two weeks in July, he added, Hirsch was completely out of all size coolers.

Other distributors were similarly affected, he declared. He related the instance of one motel owner who had cut holes in the walls of his units to accommodate the brand room cooler he intended to buy. Then when he wanted delivery, he couldn't get them. Was he chagrined when other brands would not fit the opening?

Williams said that Hirsch had sold units to five motels before its supply ran out. One installation of which he is particularly proud was made in the Alamo motel on East Main St.

Here he installed 12 ¼-hp. Fedders window units in the rooms of the new

wing along one side of the U-shaped court. These are mounted under the window facing the court.

Motel owner A. J. Mellman turns on the units at about 4 p.m. on hot days so that rooms will be pleasantly cool when tourists come to rent them. He lets the window units run all night long, keeping the occupants comfortably cool while they sleep.

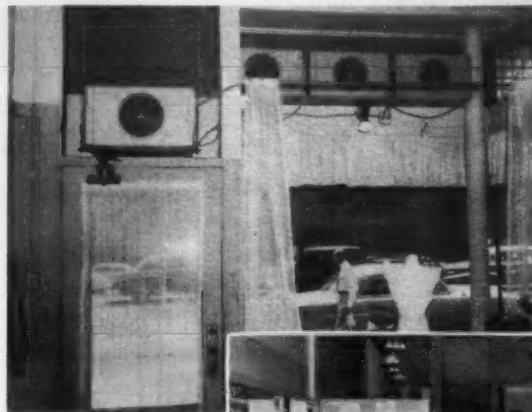
Mellman has 13 of his 20 units air conditioned. The thirteenth unit is a large family-size room that is cooled by a Tele King window unit of larger capacity. Mellman says that he plans



THROUGH THE WALL installation of coolers helps advertise Alamo Motel near Columbus, Ohio.

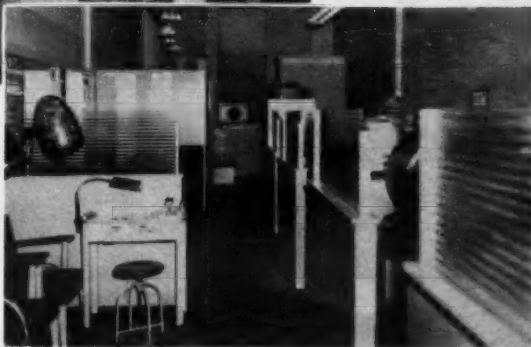
to air condition the remaining units in the court at a later date.

Williams pointed out that even though Mellman lets the units run continuously for about 18 hours per day, the cost of operation is still very small, because he is able to get a cheaper electricity rate as a larger user and because the ½-hp. motor draws comparatively little current.



THREE TONS OF COOLING (L.) provided for long, narrow beauty shop without loss of floor space.

HEAD AND WAIST LEVEL coolers (r.) at rear of beauty parlor supplement additional room units in front.



*There Is Nothing So Endearing As A Deering*

# Beauty

AVAILABLE IN 1/2-3/4 & 1 HP MODELS

**BEAUTIFUL PROFITS FOR YOU!**

**DEERING does it AGAIN!**

EXCLUSIVE

**THE ONLY CASEMENT WINDOW AIR CONDITIONERS:**

1. Designed and patented specifically for casement windows.
2. Window frames, muntins and mullions remain intact—no cutting, filing, sawing, or modification of casement window structure.
3. Centrifugal fans on both evaporator and condenser (high and low sides) for positive air quantity assuring highest possible efficiency.
4. Patent applied for apparatus between condenser fan scroll and end condenser coils for positive moisture evaporation under all conditions.
5. Fits any window opening as small as 10 1/4" high and 14 1/2" wide.
6. Full line of sizes for casement window installations, 1/2, 3/4 and 1 H.P.
7. Does not block out light from full section of casement window.
8. Permits lowering of shade or blinds over window from top of window to top of air conditioner.
9. As easily installed in conventional windows.
10. Lowest saturation point and highest potential of any window type air conditioner built today.

**MAIL THIS COUPON TODAY!**  
PROFIT IN 1954 FROM THE ONLY "CUSTOM-MADE" ROOM AIR CONDITIONER

I am interested in a franchise for the DEERING Casement Window Air Conditioner. Please print below.

Name \_\_\_\_\_

Company \_\_\_\_\_

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City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

**THE DEERING AIR CONDITIONING COMPANY**  
1069 CELESTIAL STREET • CINCINNATI 2, OHIO

**Curtis**  
REFRIGERATION  
AIR CONDITIONING  
COMMERCIAL

**Packaged Air Conditioning Units**  
2 to 15 Tons

**Condensing Units**  
1/4 hp. to 40 hp.

**Curtis Refrigerating Machine Division**  
of Curtis Manufacturing Company  
1912 Kienlen Ave. St. Louis 20, Mo.  
Established 1854



Mail this coupon today! Learn how Deering can deliver more sales and greater profits for you in 1954!

Now—America's first air conditioner exclusively designed and patented for casement windows, is America's most beautiful air conditioner! Custom-designed to fit casement windows in today's fine homes and apartments, Deering now adds the perfect grace note of decorator-styled cabinets in swan gray and gold. No matter what you now carry, this fast-moving profit-maker can complete your line.

Easily installed, too, without damage to window frame. Just slide in, hook in, plug in! Pushbutton controls and quiet operation insure round-the-clock comfort. During the 1953 heat wave, when others failed, Deering performed—even in temperatures above 110 degrees.





KEY NO. D-130

NEW PRODUCT MODELS IN A NEW SETTING were to be found in the new quarters on the 11th floor of the Merchandise Mart occupied by Hotpoint. Here Carol Segermark demonstrates a new dishwasher (also available this year as a portable) while at the left in the stylish kitchen setting is the Hotpoint 1954 two-door freezer-refrigerator model.



KEY NO. D-131

ACCESSORY kit devised by Frigidaire permits installation of its standard window air conditioners "flush with the drapes" as Henry Keeler of Maas Brothers, Tampa, Fla., observes. Three mounting screws on face of sill combined with adjustable tubular bracing outside permit quick installation, working from inside, Frigidaire says. Design is claimed to avoid interference with controls and air delivery.

## Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

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Products Advertised  
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KEY NO. D-132

ADVANCED STYLING AND NEW FEATURES IN BOTH upright and chest models mark new Ben-Hur 1954 freezer models. Ralph Zickert, eastern regional sales manager, points to new U-5418 18½-cu. ft. upright to be available in March, and to 20-cu. ft. chest model with capacity of 1,000 lbs. of food.

Upright model will feature 5 freezing surfaces, three door shelves, and new-type shelf guards. Chest model has completely new exterior styling, including styled control plates, and has a new "push or lift" safety latch.

KEY NO. D-133

WHAT'S THIS? NO FREEZER COMPARTMENT IN A MODERN REFRIGERATOR! That's exactly the case in the new Gibson Refrigerator Co. "Market Master" refrigerator model introduced at the Marts. This is a refrigerator designed for use where there is a home freezer in use either in the kitchen or in a nearby space.

Elimination of the freezer section opens up the entire cabinet to full-height and

## What's New At the Win

(Additional pictures of new products appear in future issues.)



## Announcing Another Important New Development...

# ALUMINUM Room Cooler EVAPORATORS and CONDENSERS by REYNOLDS



### Here's Why Aluminum Is First Choice For Room Cooler Evaporators and Condensers:

All-aluminum evaporators and condensers assure rapid heat transfer—aluminum fins and tubes facilitate fast, economical cooling and efficient operation. All-aluminum evaporators and condensers can't rust, thus there's no danger of rust from these parts causing unsightly stains below the outside of the window.

Remember, also, aluminum's light weight aids in portability and ease of installation. Aluminum is strong—gives years of dependable service. Aluminum is economical, too. These and other aluminum advantages add up to serviceability, efficiency and economy unmatched by any other material... protect the quality of your products.

### Here's Why Reynolds Aluminum Fabricating Service Is First Choice For Producing Room Cooler Evaporators and Condensers:

Reynolds wide experience in refrigeration as one of the nation's leading producers of parts for this industry has pointed up the advantages in room cooler evaporators and condensers made entirely of aluminum. This experience—plus Reynolds skill, mass-production facilities and quality control from mine to finished product—assures production of all-aluminum evaporators and condensers to quality standards exceeding

industry requirements.

Remember—the tremendous room cooler market is just now opening up. One good way to get your share of this important business is to be sure your units offer top performance and top quality. All-aluminum evaporators and condensers from Reynolds Aluminum Fabricating Service can play an important part in your performance and quality story.

Your Dollars Are Still Worth 100 Cents in Aluminum!

# REYNOLDS ALUMINUM

BLANKING • EMBOSING • STAMPING • DRAWING • RIVETING • FORMING



# What Was New

at the Winter Marts

of new products shown at the Marts will (s.)



—KEY NO. D-134—

POSING WITH REVCO'S NEW 17-CU. FT. UPRIGHT AND NEW TWO-LID MMMC 26-cu. ft. chest-type home freezer models is Joan Cassell. Both upright and chest models have the unique static-type condenser arrangement around the wall that results in a "no drip" exterior, the company states.

The upright model UF-174 has exclusive new stack-rack second shelf, and two slide-out food baskets, plus 4 door racks, and automatic signal light system. Chest model has new baskets with plastic handles, new type pastry rack, light-up temperature control and indicator, and light-pressure lock lid and handle.

full-width expanse for keeping all foods that require refrigeration, but do not need to be frozen. The storage space in the Market Master is said to be equivalent to the food storage space in any 15-cu. ft. refrigerator with a conventional freezing space. There is no defrosting necessary. Model is equipped with two "Swing'r Crisp'rs," door shelves, and butter keeper.



—KEY NO. D-135—

BEVERAGE KEEPER AND REMOVABLE EGG RACK AND SPECIAL "SNACK" KEEPER in new 1954 Westinghouse "Frost-Free" refrigerator models are demonstrated by Arleen Williams (left, pulling out beverage keeper drawer) and Stan Stephenson (right) pointing to egg rack and snack keeper. Stephenson has just been promoted to manager of household refrigeration in the Westinghouse Appliance Div.



—KEY NO. D-136—

THREE-POSITION PULL-OUT CONTROL ON ATTRACTIVE "DRAWER" STYLED casement window air conditioner introduced by Servel is demonstrated by L. E. Libby, Servel's director of retail sales development. The three stages of pull-out control provide (1) ventilation; (2) ventilation and cooling; (3) full cooling.

Available in 1/2 and 3/4-hp. sizes, the air conditioner will fit any standard casement window, and also has an adapter for use with sash-type windows, where desired. Unit has plastic cover, with mahogany finish on "drawer" front.



—KEY NO. D-137—

DOUBLE OVEN SERVICE in a single oven range. This new Kelvinator electric range gets two-oven utility out of a feature called the "bonus broiler." Broiler unit is removed from top of oven and placed in the left-hand storage compartment. Opening compartment door to the "broil" position starts cooking, makes possible simultaneous baking and broiling.



—KEY NO. D-138—

QUICFRETZ TWINS have been introduced for 1954 by Quicfretz, Inc. Combination is made up of a 4.2-cu. ft. upright freezer and a matching 5.6-cu. ft. refrigerator. Two units have a plastic-covered top that adds extra work space to the kitchen.

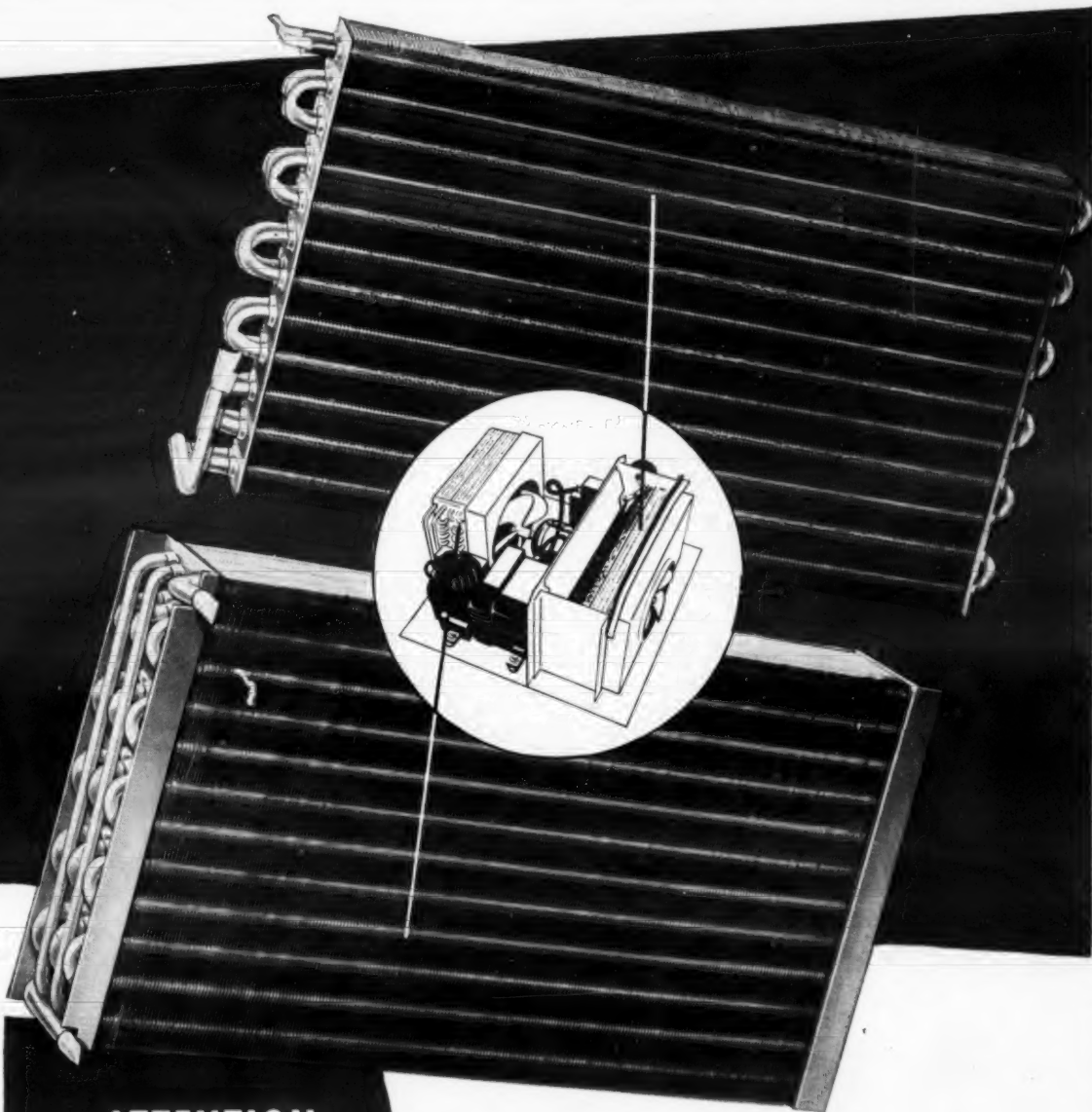
YEAR-ROUND  
Air Conditioning  
with One Central Unit

**TYPHOON**  
MODEL S-W

ONLY  
Heating-Cooling Unit

WITH  
**ONE-BUTTON CONTROL**

TYPHOON AIR CONDITIONING CO., INC.  
794 Union Street • Brooklyn 15, N. Y.  
Specialists in air conditioning since 1909



**ATTENTION  
ROOM COOLER  
MANUFACTURERS!**

During the past year, Reynolds Aluminum Fabricating Service engaged in important development work with industry people, and as a result of this work, is now tooled up for production of all-aluminum room cooler evaporators and condensers. We will be glad to work with you in designing aluminum parts for your present or future models. For full details, contact the Reynolds office listed under "Aluminum" in your classified telephone directory, or write Reynolds Aluminum Fabricating Service, 2054 South Ninth Street, Louisville 1, Kentucky

Write for your free copy of the new 16-page Appliance Parts brochure

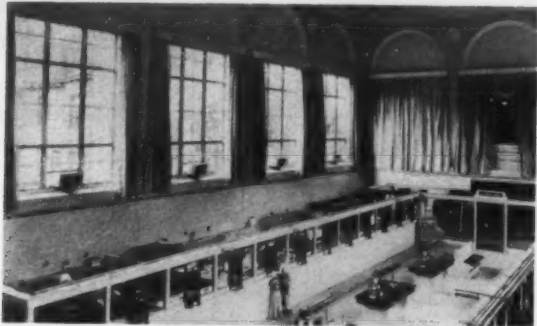
See "Mr. Peepers" Sundays on NBC-TV. Consult local listings for time and station.

# FABRICATING SERVICE

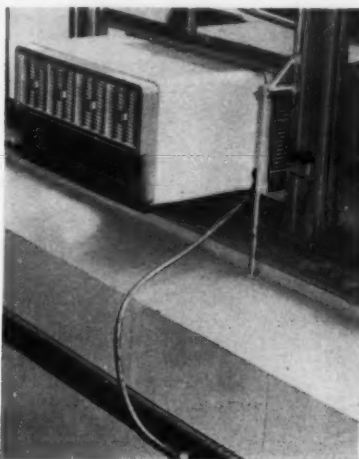
ROLL SHAPING • TUBE BENDING • WELDING • BRAZING • FINISHING







WIRING FOR THESE AIR CONDITIONERS in Pittsburgh's West End Bank is concealed in the "Surfaceduct" raceway passing just below the window ledges. Bank directors insisted that the air conditioning be installed so as not to disturb the bank's interior design. Picture at right shows how connection is made between unit and raceway.



## Raceway Below Windows Hides Wiring for Cooling Units, Saves Drilling Through Concrete

PITTSBURGH—When directors of Pittsburgh's West End Bank decided to air condition the bank they laid down rather strict requirements on the way the job could be handled—and for good reason.

The West End Bank was built in 1927 and, when opened, brought comments from local architects for its clean interior design. Bank directors didn't want these clean lines marred in any way by air ductwork or exterior wiring. Yet they wanted the job done economically and quickly, without interfering with the bank's normal operations.

Electrical contractor E. F. Miles,

working with West End Bank President H. S. Kossler, came up with an installation which answered all the requirements and which Miles put in in just six days.

It was done with window air conditioning units and "Surfaceduct."

The units, Philco air conditioners, were installed in nine of the ten bank windows, and Surfaceduct was used as a raceway to carry the power conductors.

The units are all 1-hp. and operate on 220-volt service, so a new electrical system was needed. These demands would have placed too great a load on the existing circuits.

Power enters the building through the basement. From there, conductors run through the bank's 16-in. concrete floor to a control panel on the first floor. From this panel, wiring for all units goes into the Surfaceduct and around the bank just beneath a plaster cove under the windows. There is an outlet in the duct beneath each window.

All lighting, business machines, and other electrical services are handled by the wiring system installed when the building was erected.

According to Miles, without the Surfaceduct he used it would have been necessary to drill through the



## Window Isn't the Only Place You Can Install A Window Type Cooler

CHICAGO—Although window type room air conditioners are designed primarily for easy installation in standard double sash windows, special installations can be made to solve specific problems in homes, offices, or commercial buildings, Armand Zucker, Mitchell Mfg. Co. director of design, revealed today.

Zucker cited examples of air conditioner installations in other types of windows, in either interior or exterior walls, inside the room and in transoms.

He said conditioners may be installed in casement windows by removing several panes of glass and vertical window frame members. The unit is placed in the opening, with Masonite panels and sponge rubber strips used to fill any extra space.

To install room air conditioners in exterior or interior walls, openings are cut in the wall and the conditioner sealed in. For an interior wall installation, best results are obtained if the room behind the unit is fairly large, since heat from the space being cooled must be dissipated in the adjoining room.

Exterior wall installations are especially popular with hotels and motels which want individually-controlled air conditioners without blocking the view from the windows, Zucker reported.

Multiple exterior wall installations may be used to cool large office areas even though partitions block part of the space from direct access to the room air conditioner.

Console installations are used to avoid projection of air conditioner units beyond the window line. In this type of installation, the rear half of the unit is placed in a cabinet mounted flush with the window.

Zucker said installations in the transoms frequently found above store display windows permit cooling of the store without sacrificing window display space or floor space.

## Bernard Brezinski Named Service Engineer by Cory

CHICAGO — J. W. Alsdorf, president of Cory Corp., has announced the appointment of Bernard Brezinski as service engineer.

Brezinski is an electronics graduate of DeForest Electronics school, Chicago. In addition, he attended Herzl Junior college in that city besides taking specialized training in the field of refrigeration.

Prior to his association with Cory, Brezinski was a partner in his own television and refrigeration service business. He also has been a service manager with General Outfitting Co. and Ace Television & Appliance Repair, and has been a service engineer with Crosley Corp. and the Harry Alter Co., Chicago.

In his new post, Brezinski will headquarter in the Cory Service Dept. at the main Cory factory in Chicago. He will serve as special assistant to the Cory's chief service manager, George Sedlack, and will devote a major share of his time to organization, education, and supervision of Cory's field service.

## Steinbaugh, Memphis Airtemp Representative, Dies at 59

MEMPHIS—Ralph W. Steinbaugh, 59, special representative of Chrysler Airtemp Corp. here, died of a heart ailment recently at his home.

Steinbaugh, active in the air conditioning field for many years, moved here two years ago from St. Louis. He has worked in a managerial capacity for Chrysler in St. Louis, Dayton, Chicago, and Council Bluffs, Iowa.

# Who?

**WHO** developed the room air conditioner that didn't stick way out in the room?

**WHO** improved it with the new slim silhouette that scarcely extends beyond the sill . . . new directional air flow . . . new simplified controls and built-in thermostat on three models?

**WHO** is backing it with the spectacular support of full-color advertisements in Life?

**WHO** knows air conditioning best?

**CARRIER, OF COURSE!**

### Carrier Corporation

310 S. Geddes Street, Syracuse, New York

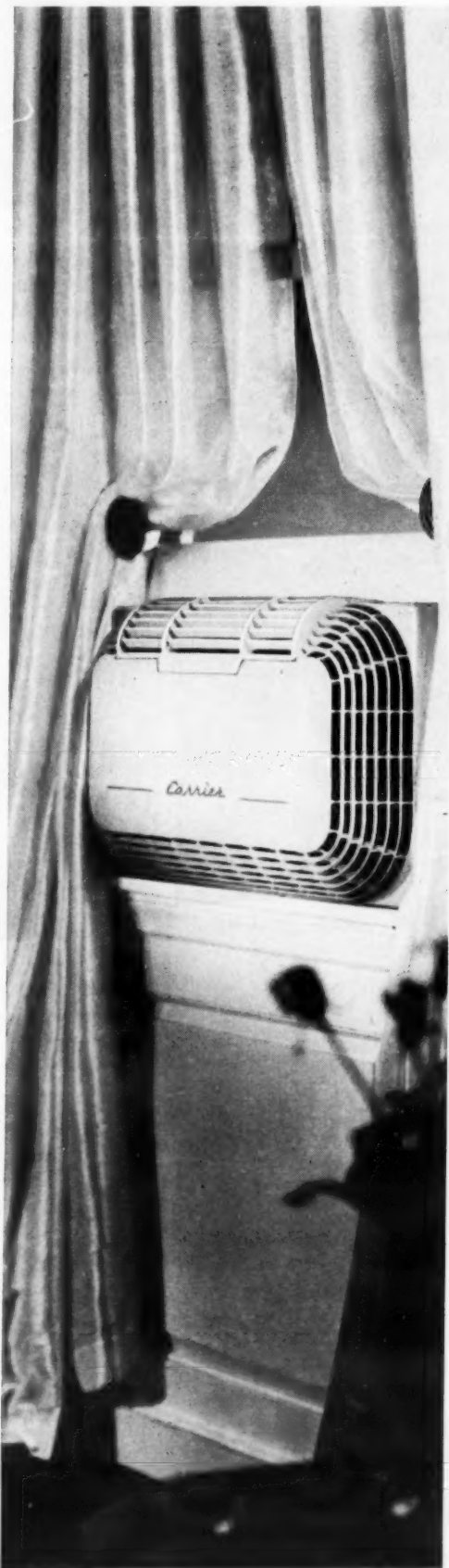
Who is my nearest Carrier distributor?  
Please send me his address.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_



## FOR HIGHER EFFICIENCY IT'S BROOKSIDE

*Custom Built Fan Blades to Meet Exact Specifications*

### Thousands

Have Been Field Tested For Years Assuring Dependability.

Brookside Propellers available in a complete range of sizes and arrangements, fill all requirements of air conditioning and ventilation.

(We Guarantee Delivery Date)

**M-PEL-AIR**

Brookside Products Company, Inc.  
McCordsville, Indiana



## W. L. Fleisher To Receive ASHVE Award for 1953 at Houston Meeting Jan. 27

NEW YORK CITY — Walter L. Fleisher of New York City has been nominated to receive the F. Paul Anderson Medal of the American Society of Heating & Ventilating Engineers for 1953 in recognition of outstanding contributions to the advancement of heating, ventilating, and air conditioning in the field of human comfort, it was announced recently by Reg. F. Taylor, president of the society.

Formal presentation of the award will be made at the society's 60th annual meeting in Houston, Texas, Jan. 27, by Taylor.

Comfort conditioning has been Fleisher's primary interest in his chosen field since 1903 when he supervised the engineering of the ventilating system of The New Amsterdam Theatre.

He later designed, supervised, or installed the ventilating systems for the Shubert, Ames, Forty-Fourth St., Fulton, Maxime-Elliott, and dozens of others including theaters in Chicago, St. Louis, Newark, and other cities.

In 1905 he supervised the work at the Hippodrome Theater where one of the first applications of refrigeration for cooling was made in a ventilating system.

Fleisher was graduated from the University of Pennsylvania in 1900, and received an M. S. degree from the same school in 1901. He was awarded an honorary M. E. by the university in 1931.

He started his engineering work as engineer-in-chief from 1903-11 of Francis Bros. and Jellet, Philadelphia. He left that position to form W. L. Fleisher & Co., Inc., serving as president, treasurer, and chief engineer until it was merged with two other companies under the name of The Cooling & Air Conditioning Corp.

In 1930 he established a consulting office in New York under his name for patent expediting, industrial analysis, and advisory work. Since 1934 he has been president of Air & Refrigeration Corp.

In 1911 Fleisher designed the first theater cooling system employing an air washer in the Fulton in New York. Together with W. H. Carrier, he gave comfort conditioning its first big development in the air conditioning of the J. L. Hudson Store and others in Detroit in 1921. This marked the beginning of wide use of the by-pass system of air conditioning for comfort.

Fleisher is the holder of some hundred patents in this and foreign countries covering practically every phase of cooling, ventilating, controlling, cleaning, drying, and processing for comfort.

Fleisher is the holder of some hundred patents in this and foreign countries covering practically every phase of cooling, ventilating, controlling, cleaning, drying, and processing. His patents on local recirculation and the Fleisher by-pass method were basic to all comfort air conditioning.

A life member of ASHVE, he served as president in 1941, was a member of Council from 1936-42, and was on many Council committees including the executive, finance, and membership.

He is now serving as chairman of the committee for revision of the code of minimum requirements for comfort air conditioning composed of representatives of the ASHVE, ASME, ASRE, ARI, and the medical profession.

## Remington Names Three Midwest Sales Representatives

AUBURN, N. Y.—Appointment of three sales representatives for mid-western territories was announced recently by M. L. Judd, general sales manager, Remington Corp., manufacturer of room air conditioners.

They are Ronald H. Pepin of Detroit as Remington sales representative for Michigan, Ohio, and western Pennsylvania; E. G. Sommerlath, Jr. as district representative for Kansas, Missouri, and southern Illinois, and S. M. Davison Co. as representatives for Chicago, northern Illinois, Wisconsin, and Indiana.

Pepin, whose office is at 900 Whitmore Road, Detroit, was graduated from the University of Michigan in 1927 with a degree in electrical engineering. Since then, he has been continuously in the appliance field, both as distributor and as owner of one of the largest appliance dealerships in Detroit.

Sommerlath, whose sales office and warehouse is at 2741-47 Olive St., St. Louis, has been contacting distributors in this area since 1945. Prior to forming his own business, Sommerlath was a vice president and general sales manager of a division of the Shapleigh Hardware Co.

Davison, assisted by his son, Sam Davison, Jr., makes his office at 1509 Oak St., Evanston, Ill. Davison has been operating his own major appliance business in the Chicago area since 1946, and prior to that time was a district manager with the Westinghouse Electric Co.

## Eckenhoff To Represent Viking In Eastern Area

CLEVELAND — Sales Manager Frank Gibbons of Viking Air Conditioning Div. of National Radiator Co. announces the appointment of W. Benjamin Eckenhoff to the Viking sales staff.

He will represent the Cleveland manufacturer in eastern Pennsylvania, southern New Jersey, Delaware, Maryland, and Washington, D.C.

Eckenhoff joins Viking from the firm of Harry M. Bell & Associates of Philadelphia, manufacturers' representatives. Previously, Eckenhoff was with Roberts & Mauder Corp., Hatboro, Pa., for 15 years in sales and production and as vice president for five years.

Eckenhoff attended the Wharton School of Business of the University of Pennsylvania and now lives at Jericho Manor in Jenkintown, Pa.

## Airson Co. Formed In Wis. To Make, Sell Air and Sound Conditioning Equipment

MILWAUKEE — Airson Co., Inc., has been formed in suburban Wauwatosa "to manufacture and sell air conditioning, sound conditioning, and light diffusion products."

Incorporation papers were signed by Walter and Eleanor Ericson of Wauwatosa. Capital stock: 200 shares of common stock at \$100 per share par value and 300 shares of preferred at same value.

## Ventilation Conference Set for Feb. 22-25; 3 Design Groups, 9 Talks Are Scheduled

EAST LANSING, Mich. — Third annual Industrial Ventilation Conference sponsored by Michigan State college and the Michigan Department of Health with the assistance of manufacturers and users will be held at Kellogg Center here Feb. 22 to 25.

In addition to formal talks before the general assembly, participants will divide into three groups for classroom study and designing of specific ventilation systems based on design problems set up for the conference. These are:

"1. Basic design problem to include fundamentals of airflow, design of balanced ductwork, hood selection, discussion of losses in ductwork, fittings, hoods, complete design of a simple exhaust system.

"2. Design of more complex exhaust system, either dust exhaust or vapor exhaust, fan and collector selection, hood design and selection. Requires previous experiences in design of balanced ductwork and knowledge of resistance losses.

"3. Application of ventilation control to various operations in typical industrial plant. Includes dust and vapor exhaust, painting, drying, general ventilation, and location and selection of air makeup equipment. Requires previous experience in duct and hood design and general knowledge of industrial ventilation."

The three-day session will also include nine talks:

"Ventilation Practices—Then and Now," by Prof. Charles H. Pesterfield, Michigan State college.

"Air Flow Measuring Instruments," by B. D. Bloomfield, Michigan Department of Health.

"Inside the Industrial Ventilation Manual," by George Hama, Detroit Department of Health.

"Engineering a High Velocity Duct System," by W. J. Rettenmeier and Joseph G. Black, Jr., Spitzley-Rettenmeier Sheet Metal Co.

"Sampling and Air Contaminants," John C. Soet, Michigan Department of Health.

"Design and Application of Dust Collection Equipment," John M. Kane, American Air Filter Co.

"Effect of Fan Connections on Performance," William E. Tracey, Sturtevant Division, Westinghouse Electric Corp.

"A Survey of Industrial Ventilation Practices," Prof. Floyd N. Calhoun, University of Michigan.

"Comfort Ventilation and Makeup Air," K. E. Robinson, General Motors Corp.

Fee for the conference is \$25, for supplies, a banquet, and luncheon.

## Mook Named To Represent Trion In S'eastern Texas

McKEES ROCKS, Pa.—Trion, Inc. here, designer and manufacturer of electronic air cleaners, has announced the appointment of W. R. Mook, Jr., Houston, Texas, as a representative. He will specialize in the sales and service of Trion equipment throughout southeastern Texas.

## For Step No. 3 in perfecting air conditioners . . .

## L·O·F FIBER-GLASS for Noise Control

In Step No. 3—the control of noise—air-conditioning engineers tell us that two kinds of L·O·F Fiber-Glass are indicated;—

One is the same basic material now used as thermal insulation for air-conditioning ducts—flexible, blanket-type L·O·F Super-Fine Fiber-Glass. This provides high-efficiency sound insulation; absorbs airborne sounds in the middle- and high-frequency ranges. Vinyl-faced Super-Fine is specified for highest sound-absorbing efficiency.

To reduce noises created by vibration, L·O·F now makes available High Density Compressed Fiber-Glass. This is a new form of compressed, high density Fiber-Glass which can be molded, if desired, into shapes. It can be used to form blower housings and air intake deflectors, and to line cabinets.

L·O·F Fiber-Glass in both forms is easily handled, easily cut and easily installed. The fine glass fibers will not burn, absorb moisture, mildew or rot.

For consultation on applying both L·O·F Super-Fine and L·O·F High Density Compressed Fiber-Glass to air conditioning units, call your nearest L·O·F office (offices in 26 major cities). Or write: Libbey-Owens-Ford Glass Company, Fiber-Glass Division, 4414 Wayne Building, Toledo 3, Ohio.



1. Cooling



2. Dehumidifying



3. Controlling Noise



## FIBER · GLASS

LIBBEY-OWENS-FORD GLASS COMPANY  
FIBER-GLASS DIVISION

## E-Z-SEE LIQUID INDICATOR



NEW FLO INDICATOR FLAP SHOWS ALL FLOW CHANGES

Analyze flow, function of expansion valve, by means of E-Z-SEE sensitive flap, instantly responsive to variations in flow. Positively leak-proof — hundreds of thousands in use.

Available at Wholesalers everywhere

REMCO  
INCORPORATED  
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## Selling Refrigeration to Chains

**McMillan of Hussmann Discusses Firm's Policy of Selling at Net Cash Price, Why This Method Has Helped Create Solid Manufacturer-Distributor Relations**

CLEVELAND—Hussmann Refrigeration Co.'s 18-year-old policies on selling to chain food markets and on distributor discounts were explained to members of the National Commercial Refrigerator Sales Association at the seventh annual convention of the group here recently by Hussmann's president W. B. McMillan.

Because they have been tried and tested over such a long period of time, McMillan believes that these policies are based on sound basic merchandising principles and not upon any passing fads.

It was 18 years ago, he declared, that Hussmann set up the policy of selling its products to distributors at a net cash price, f.o.b. factory.

This was done, he said, as the best means for the company to compete both with manufacturers selling at high list prices with high discounts, and manufacturers selling at low list prices with low discounts.

"We discovered that in both these merchandising methods, the price paid by the distributor to the manufacturer was just about the same," McMillan asserted.

So Hussmann decided to set only a net cash price on its equipment and let the distributor set his own price to the customer, based on his own particular operating costs and desired profit.

In response to a demand for a suggested list price, however, the

company asked the distributors to submit to the company an outline of their operating cost figures. Based on these figures, Hussmann established suggested list prices that would cover the dealer's operating costs and allow him to make a profit.

McMillan pointed out that the submission of distributor operating cost figures to Hussmann is a continuing program that assists the manufacturer greatly in working closely with the distributor and learning his problems.

"These things can only be done," he noted, "by mutual confidence between the distributor and the manufacturer."

### Distributors Limited

"We believe in having a limited number of distributors with whom to work. We look upon the distributor as much a member of the company as any employee. We don't own the distributors or have any of our money invested in their businesses. But we feel a great responsibility to see that the distributor succeeds, for a distributor failure directly reflects back upon the manufacturer in that market."

"On the other hand, we get a lot of help from the distributors in designing our equipment to keep abreast of trends in the market."

McMillan explained to NCRSA that Hussmann's contract with the dis-

tributor is cancellable with or without notice or with or without cause by either of the parties. These contracts also contain a clause setting forth by name the national food chains that are excluded from the distributor and will be sold directly by the manufacturer.

### Chains Buy Equipment, Not Service

These chains are the ones who want to buy only equipment and not services—and they are not furnished any services. They are the ones who have their own store planning departments, their own installation crews, and their own servicemen, McMillan said. They are given to understand at the time of purchase, he added, that they are not to bother the distributor for anything. If the chain does find he needs some service from the distributor he is told he must pay for it at retail prices.

In our opinion, handling the national chains in this manner is a service both to the customer and to the distributor, McMillan stated. We can give the customer what he wants and by getting this additional volume, we can lower manufacturing costs on all equipment, which is reflected in lower prices to the distributors.

McMillan said that he felt sure the distributors would have no quarrel with this method of handling

## Commercial Refrigeration

### NARGUS Plans June 13-17 Meeting In Washington

CHICAGO — The nation's capital will be the host city to the 55th annual convention of the National Association of Retail Grocers, June 13 through 17, 1954, the group has announced.

National Guard Armory will be headquarters for all NARGUS convention business sessions and exhibits.

The convention meetings will feature talks by industry leaders, panel discussions, and reports from all branches of the food field—retailing, wholesaling, and manufacturing. The nation's top government officials will deliver major speeches.

Six months before the opening of the convention, nearly all exhibit space in the gigantic armory has been contracted for by leading firms and suppliers in the food industry.

More than 400 exhibits will feature all kinds of equipment, fixtures, and building necessities in addition to a wide variety of food and grocery items, including perishables and frozen foods. There also will be displays of non-food items.

The social program will include a reception at the White House for the ladies, the NARGUS President's party and entertainment at Constitution Hall, twin convention banquets at the Hotel Mayflower and Hotel Statler, and sightseeing excursions, including a trip by boat down the Potomac River to Mount Vernon.

Reservations should be made through National Association of Retail Grocers, 360 N. Michigan Ave., Chicago 1, Ill.

### Commerce Refrigeration Co. Moves to New Building

SAN ANTONIO — Eugene Bohne, Jr., owner of the Commerce Refrigeration Co., located at 1035 and 1111 E. Commerce St., has announced that his company will soon move into its new building at 1102-08 E. Commerce St.

The company will have 8,000 sq. ft. of floor space in its new building and a 104-ft. long loading dock at the rear. The company is distributor for Friedrich Refrigerators, Inc., and has been the main outlet for that manufacturer for 16 years. The company handles refrigerators and air conditioning units.

### MISSING SOMETHING?

More and better useful information is yours for the asking. See "What's New" page.

Use Key No. for fastest service.

## Happy Talk!

Show a dealer a way to increase sales and 10 out of 10 times he'll smile. Can't blame him either. More sales mean more money in his pocket. And have you ever met a man who didn't want to make more money?

Well, if you sell air conditioners, start smiling. G.E.'s big Early Bird Sale will sell air conditioners for you—in the winter-time!

How? G.E. makes it possible for you to offer your customers big savings if they buy in winter. And as a sales-clincher: no payments till May! (Of course, you get your money right away.)

Why not cash in on this winter wind-fall? Write, wire or call the folks at Section ACR-2, General Electric Company, Air Conditioning Division, Bloomfield, New Jersey. They'll be glad to tell you all about it.



**Packaged  
AIR CONDITIONERS**

GENERAL ELECTRIC

## The Open Door for '54

In '53 the LEHIGH TEAM pushed the sales curve clear off the top of the chart. It was the best year in Lehigh history. You might be interested to know what did it.

Was it Engineering? Design? Quality? All played a part.

But we believe that it is mainly because Lehigh keeps the door open to business — and an open mind to your needs and viewpoint.

Lehigh's whole approach to refrigeration is one of service and development — anticipation and delivery. You saw part of this in '53 in Lehigh's major contributions to passenger car air conditioning and better truck refrigeration. You saw it too, in the entire BLU-COLD line of condensing units. The 'cleanest', finest and most reliable units in the industry.

Lehigh's plans for '54 are now being carried out. Included are greatly expanded production, the introduction of new models and widened customer services. More of what you seem to like.

So we repeat what we have so frequently said — "If you buy, sell, service or install refrigeration — it will pay you to know Lehigh better!"

The LEHIGH TEAM

**Lehigh**  
**BLU-COLD**  
**CONDENSING UNITS AND SYSTEMS**

Lehigh Manufacturing Co., Lancaster, Pa.

Export Dept., 13 E. 40th St., N. Y.

### Sherer Appoints Groth Upper Midwest Sales Mgr.

MARSHALL, Mich.—Appointment of Robert C. Groth as upper midwest zone sales manager for Sherer-Gillett Co. was announced recently by John S. Twist, general sales manager. Groth has had wide experience in all phases of the commercial refrigerator industry.

After attending the University of Minnesota, Groth joined his father in the Minneapolis Show Case & Fixture Co. in 1937. He remained with that company in various capacities until 1952 when he became president of Sterling Industries, Inc., which connection he will retain.

Groth will make his headquarters in New Richmond, Wis. Territory to be covered by him for Sherer will consist of the states of Minnesota, North and South Dakota, and Iowa, together with parts of Wisconsin and Montana.

### Harvey Ahrens Dies, Was C. Schmidt Vice President

CINCINNATI, Ohio — Harvey O. Ahrens, 57, vice president of the C. Schmidt Co., manufacturer of commercial refrigeration, died Dec. 13 at Christ Hospital here after a long illness.

Ahrens is survived by his widow, a daughter, and two brothers.

### MARSH Instruments

The Serviceman line of Testing Gauges, Testing Thermometers, Timers, etc. Pressure Gauges and Dial Thermometers for all services. Marsh-Electromatic, Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT CO.

Sales Affiliate of  
Jas. P. Marsh Corporation,  
Dept. D., Skokie, Ill.



## RESTAURANT & BAR EQUIPMENT

### All-Expense-Paid Trip to Paris

## Carrier 'Ice Maker Sweepstakes' Opens Feb. 15; Variety of Prizes Offered

SYRACUSE, N. Y.—The Second Annual Carrier Icemaker Sweepstakes with a grand prize of an all-expenses-paid trip to Paris, France, for the winning retail salesman and his wife, was announced recently by Carrier Corp.

In addition to the grand prize, four awards of \$500 each, one in each Carrier region, 27 other bonus awards, and merchandise points for every sale during the contest will be offered.

### DISTRIBUTOR SALESMEN TO PROFIT

Distributor salesmen will also receive points for each unit sold by their dealer contestants at the retail level, and distributor sales managers will be awarded four regional bonuses for the top contestants in the qualifying round.

The Carrier Vice President's Cup will be presented to the distributor whose dealer contestant wins the trip to Paris at the end of the Sweepstakes.

Describing the Sweepstakes, which opens on Feb. 15, completes its qualifying round on April 10, and ends on May 8, Michael J. Kane, Carrier Icemaker sales manager, predicted that there would be nearly a thousand retail salesmen entering.

Last year's Icemaker Sweepstakes, the first conducted by Carrier, was won by George Brennan of Florida Weathermakers, Inc., Jacksonville, Fla., who sold 56 ice-making machines. Brennan's prize was \$1,000 plus merchandise points he received for sales and bonuses during the Sweepstakes.

First distributor winner of the Vice President's Cup was Vernon Kelly of Florida Weathermakers, Inc. The prizes were presented at a banquet in Syracuse, N. Y., Carrier headquarters.

### FLY TO PARIS

The trip to Paris will be made via Trans-World Airlines. Arrangements have been made for the winning couple to stay at a hotel in that city for 10 to 14 days with meals provided, plus special trips to night clubs and points of interest.

All entries must be submitted to Carrier through the distributor in the territory by Feb. 13 to qualify for the Sweepstakes, Kane said. Any dealer salesman can enter without cost or obligation to himself or the dealer firm he represents by getting in touch with the nearest Carrier distributor.

Beginning Feb. 15, the qualifying round will consist of a series of four two-week sprints in which 16 bonus awards will be made. In addition to 3,000 merchandise points for each icemaker sold, the contestant selling the greatest number of units in each of the four Carrier regions during

each of the sprints will receive the following bonuses:

First sprint—25,000 merchandise points.

Second sprint—\$125 paid against the expenses of a vacation or week-end trip.

Third sprint—25,000 points.

Fourth sprint—\$125 vacation or week-end expense money.

At the end of these qualifying sprints, the over-all retail salesman winner in each of Carrier's 11 sales districts will be awarded 40,000 merchandise points. The top salesman in each of Carrier's four regions will receive \$500.

The top 25 salesmen in each Carrier region at the end of the sprints will qualify for the final three weeks' Sweepstakes for the Paris prize trip. Ties will be included among qualifiers. Only those icemakers sold during this final period will count toward the grand prize. All sales will continue to receive 3,000 merchandise points.

The icemakers to be sold are Carrier's 200 and 450-lb.-a-day models. These units produce cubes or any of three grades of crushed ice according to the control setting on the unit. The ice-crushing unit is built in at the factory.

Information on the contest was announced to Carrier distributors by registered mail sent on Jan. 4.

Contestants will receive a catalog showing thousands of items available through Belnap and Thompson's, Chicago, in exchange for merchandising points. Three thousand points will purchase prizes worth about \$21 at retail, Kane said.

## Schaefer Appoints Two Distributors In Canada

MINNEAPOLIS—Two new distributors for ice cream cabinets and Clearview merchandising cabinets in Canada have been named by Schaefer, Inc., it was announced by Elton F. Hess, general sales manager for Schaefer, Inc. here.

Cherry-Burrell Corp. of Canada, Ltd., Toronto, has been appointed distributor in eastern Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, and Prince Edward Island. The company maintains branch offices and warehouses in Montreal and Sussex, New Brunswick.

Dairy Supplies, Ltd. of Edmonton, Alberta, has been named distributor in Alberta, British Columbia, Manitoba, Saskatchewan, and western Ontario. Branch offices and warehouses are maintained in Vancouver, Saskatoon, and Winnipeg.

George H. Ross is vice president and general manager of Dairy Supplies, Ltd. in Edmonton, and G. E. Foote is manager of Cherry-Burrell Corp. of Canada, Ltd. in Toronto.

**Key to WATER COOLER - ICE MAKER SALES...**

**FILTRINE "Taste-Master" PURIFIER**

Stop service calls... keep out rust and sludge... open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

**Filtrine MANUFACTURING CO. BROOKLYN 38 • N. Y.**  
"Water Coolers and Filters for 40 Years"



## FLO-COLD Stainless Steel DRINKMASTER ICE CUBER-COOLER

Now Also Made in ALUMINUM

"A Case of Cool Judgment"  
**United Frigorator Engrs.**  
Menominee, Mich.

## Meeting Starts Cooperative Drive for Better Food and Beverage Sanitation

ANN ARBOR, Mich.—A nationwide, cooperative program for better health through food and beverage sanitation got under way in a three-day meeting held here recently under the joint auspices of the National Sanitation Foundation, the National Restaurant Association, and the United States Public Health Service.

The program to be undertaken will be the work of a new national voluntary organization to be known as the "National Industry-Health Council on Food and Beverage Sanitation."

Co-chairmen of the council are Cyril L. Kegler, chairman of the Public Health Committee of the National Restaurant Association; John D. Faulkner, chief, Milk and Food Branch, Division of Sanitation, U. S. Public Health Service; and Walter F. Snyder, executive director of the National Sanitation Foundation.

More than 40 representatives of the food and beverage industries, official health agencies, and others met at the foundation's offices in the University of Michigan's School of Public Health to hear reports of committees appointed at an organization meeting held last July at the first national conference on food protection at Ann Arbor.

Purpose and scope of the newly-organized council was announced as "the development and promotion of agreed principles for the protection of health; and the voluntary coordination of the efforts of industry, health agencies, and the public in the

betterment of food and beverage service and the environmental sanitation conditions surrounding such services in the home, at public and private establishments throughout the community."

The council is said to represent the most comprehensive unified effort to date on the part of official and voluntary health agencies, and of the food and beverage industries, to focus the attention of the public and industries on the latest advances in food protection technology and public health practice.

The far-reaching program outlined by the committees of the council will enlist the support of all the major food and beverage industries. It will also emphasize the necessity of public awareness as to the benefits of food protection and cleanliness in schools and hospitals, in other institutions and in the home.

A series of pilot studies and field tests in various communities is being planned to determine the effectiveness of all elements of the program. The results of these tests and studies will be made available to all communities for advancement of local health programs.

### New Outlet In Lackawanna

BUFFALO—A business name has been filed in the Erie County clerk's office for the Lackawanna Furniture & Appliance Co., 1247 Electric Ave., Lackawanna, by Eugene T. Karlis.

## Frank Klein Appointed Schnacke Sales Mgr.

EVANSVILLE, Ind.—F. C. Schnacke, president of Schnacke, Inc., announces the appointment of Frank D. Klein, as sales manager for the firm's domestic and export sales.



F. D. Klein

Klein, an engineering graduate of the University of Michigan in 1933, comes to the Schnacke organization with a wide and varied experience in the retail, wholesale, and manufacturing field of sales and applications for air conditioning and commercial refrigeration.

Joining Schnacke from the Frigid-Aire Sales Div. of General Motors, his background includes former connections with Westinghouse and Penn Controls.

Klein, for many years was vice president and chief engineer of North American Engineering, Inc., of St. Louis, which was later joined with General Engineering & Mfg. Corp., where he was assistant general sales manager and an officer of that organization.

He is author of a number of books on manufacturing processes and sales including "Process Practices in the Aircraft Industry" (McGraw-Hill) and "Don't Keep Your Foot In Your Mouth," a book on the subject of professional selling promised for the fall of 1954.

## WHERE DIRT AND RUST

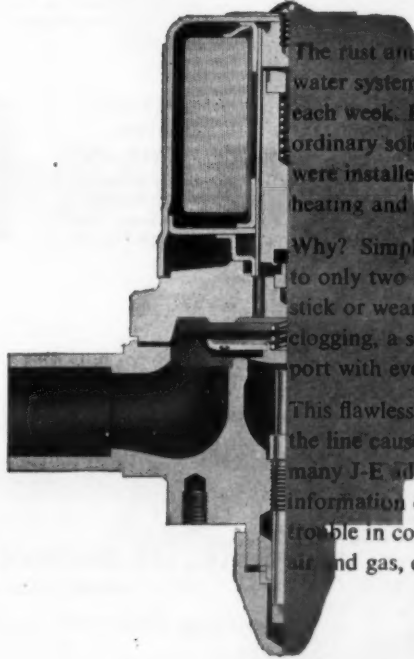


## SOLENOIDS

## STAY CLEAN AND SMOOTH-OPERATING



... at the Waterman Medical Building • St. Louis, Missouri



All J-E Solenoids are unconditionally guaranteed for 18 months

- TIGHT SEATING—no bubble tolerance.
- SIMPLICITY—only two moving parts.
- LONG LIFE—cool coils.
- DURABILITY—all corrosion-resistant material.
- OPENING PRESSURE DIFFERENTIAL—higher than most others on the market.



## SOLENOIDS THAT SURPASS THEIR SPECIFICATIONS

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## What a Contractors Association Can Accomplish

Activities of Richmond, Va., Group May Offer  
Suggestions for Other Local Associations

By C. Dale Meriele

RICHMOND, Va.—What can a local contractors association do for its members and the industry generally?

And are there any special methods which ought to be employed in handling activities within the association itself and its relations with the community?

To both questions the replies may be as varied and numerous as the individuals who volunteer answers, but a description of a successful local association may offer suggestions to similar groups.

### Leading Firms Members

Although neither the oldest nor largest of contractor groups, the Refrigeration and Air Conditioning Contractors Association of Richmond is an active organization comprised of the leading firms in the city, which already has a number of accomplishments to its record and has promise for the future.

It's always had a paid professional secretary—a factor which in all probability has contributed no little to the successful operation of the group.

The Richmond association got under way back in 1949 when an organizational meeting was held in March of that year. Instrumental in

starting the group was contractor Ralph Lampie, who had long been active in the national contractors association and who became the first president of the local organization.

Early in 1953 the group became affiliated with the national Refrigeration and Air Conditioning Contractors Association, which now has its headquarters in Cleveland.

Another event in the spring of 1953 was the appointment of attractive Patricia K. Cooley as executive secretary. Her background was one of professional association work and as such has numerous ideas and suggestions regarding the mechanics and methods of association activities.

### Have 'Associate' Members

One striking difference between the Richmond group and most other local contractors associations is that "associate" memberships are encouraged in Richmond.

These include anyone connected with the industry other than contractors, such as parts wholesalers, suppliers of steel, sheet metal, insulation, etc.

"We strongly advocate this for all associations, and we are quite openly seeking their support, financial and otherwise," says Miss Cooley.

"These associate members are in-

vited to our regular meetings and participate in all association activities, both business and social. Although they can't vote, they do have a voice in spending money of the association and can advise and assist the association in its activities," she explains.

At the present time, there are nine associate members in the Richmond group. Each pays a flat membership fee. Dues of full members are based on volume of business.

### Members Listed

Regular full members of the association include: B & G Olsen Co., Inc.; Catlett-Johnson Corp.; Herman J. Duke & Son; R. M. Dunville & Bros.; Enterprise Heating & Air Conditioning Corp.; Hungerford, Inc.; Kell Refrigeration Service; Lampie Refrigeration Service; Richmond Heating & Equipment Co.; Richmond-York Corp.; T. A. Talley & Son; and Gundlach & Co., Inc.

Associate members are Gordon Metal Co.; Hajoca; Hill-Chase Steel Co. of Md.; Noland Co., Inc.; Refrigeration Supply Co.; Steel Service, Inc.; A. R. Tiller Corp.; Virginia Insulation; and Shultz & James, Inc.

"Friendships formed between associate members and contractors, and even just the contacts made between

## Commercial Refrigeration



SPECIAL luncheon session of the Richmond group brings together Richard H. Catlett, past president; W. Leo Felthaus, current president; Patricia K. Cooley, executive secretary; Ralph Lampie, first president; and (standing) R. M. Dunville, treasurer, and T. L. Kriete, vice president.

individuals of both groups actually pay off in sales," points out Miss Cooley, who adds also that "having associate members in the organization lets the contractors work closely with local suppliers to the benefit of both groups."

One of the major focal points of the Richmond association is its 12-point code of ethics, which the group believes to be "almost a guarantee of a good job" by its members. It's been in effect three years.

In addition to guiding the operation of the member contractors, the code is also used in promoting the association and its individual members amongst prospects.

### Code Sent With Bids

Printed copies of the code, for example, are sent out by members with their bids and other mailings, and the code gets considerable mention in association advertising, about which more later.

Text of the code is as follows:

"1. We will never knowingly misrepresent our own equipment and services or those of our competitors.

"2. We will always clearly and honestly inform our customers as to the details of the installation to be made and so write our contract proposal.

"3. We will assume the responsibility of including in work designed and installed by us all features which may be necessary for the satisfactory operation and economical servicing of the system.

"4. We will not knowingly under-size equipment or accessories in any proposal made by us without clear understanding in writing between our customers and ourselves.

"5. We will follow to the letter all specifications on which we receive awards unless authorized in writing to modify these specifications.

"6. We will always quote our equipment and work at prices which are fair to our customers and will allow ourselves a reasonable profit.

### No Hidden Discounts

"7. We will not extend hidden discounts or gratuities.

"8. We will assume full responsibility for our work.

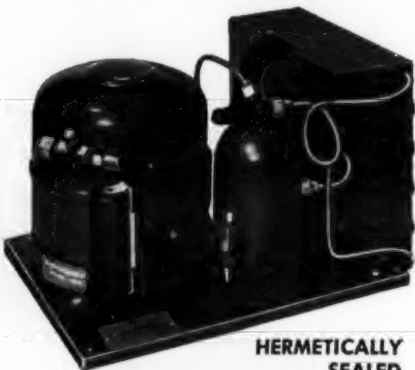
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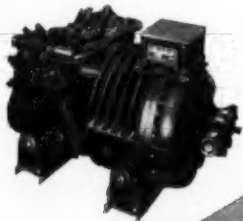


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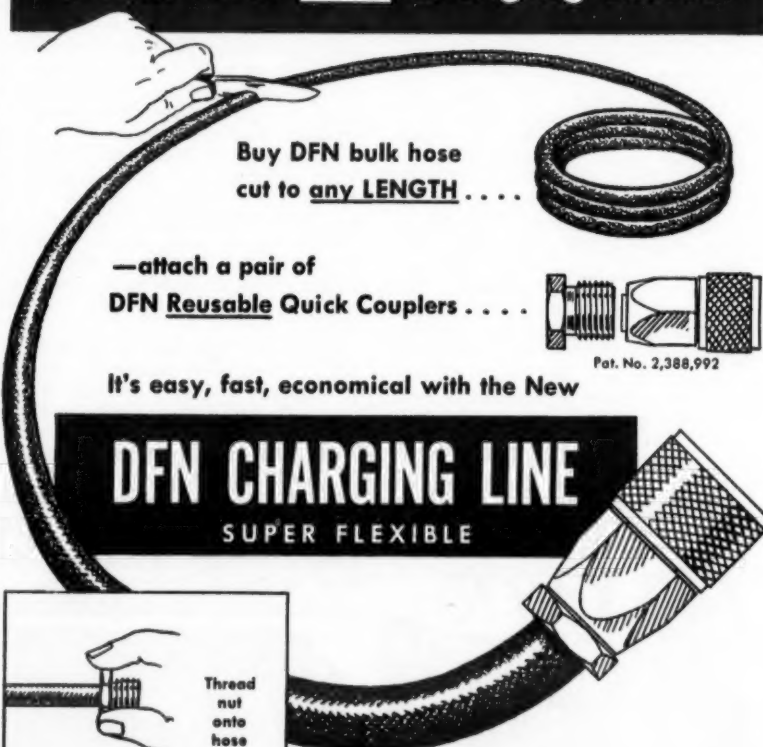
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CHECKING copies of the weekly newsletter, Miss Cooley confers with Carolyn Beard (left).



FIRST ADVERTISEMENT in a 13-week series which the Richmond association ran last summer.

## Grievance Committee Puts Teeth In Code of Ethics--

(Continued from preceding page)

bility for the satisfactory performance of installations designed and installed by us and will make prompt and cheerful corrections of our mistakes.

"9. In the event of a controversy with a customer or his representative which cannot be amicably settled, we agree to report the situation to the Executive Secretary and request him to arrange arbitration if possible.

"10. We will respect the sub-contractors whose bids were used by us in estimating and will not accept other bids or revisions after making our final proposal prior to the award.

"11. We will not revise the price or terms of a proposal made by us after the award of the contract under which we were bidder.

"12. In the event that unfair practices, as recognized by this association as applicable to this industry, on the part of competitors, general contractors, or owners are observed by us, we agree to promptly submit evidence of such practices to the properly constituted committee of the association."

The Richmond association attempts to put "teeth" in its code of ethics by means of its grievance committee to which a member may submit complaints regarding alleged violation of the code by another member.

To date there have been only two meetings of this committee, both concerned with the problem of "second bids."

### 'Whispering' Eliminated

Having a grievance committee to which complaints can be submitted "eliminates all the undertones and

whispering which can go on in such an association," it was pointed out.

Main point here, the association explains, is: "we're just trying to keep the general contractors from 'shopping' after the first bids have been submitted to them."

The grievance committee consists of three members and Miss Cooley. Among its members are certain of the association's current officers. These are:

W. Leo Felthaus, president; T. L. Kriete, vice president; and R. M. Dunville, treasurer.

### Theme of Campaign

It was the code of ethics that provided the theme of the initial big advertisement in an ambitious 13-week program the association ran last year in the Richmond News Leader every Monday.

First ad took a large 3 column by 10-in. space to reproduce the code and list members.

"The Code that means your protection!" was the theme. Readers were advised to "look for this code at your contractor's before you buy. It signifies that absolute honesty, dependability, and quality are absolute certainties at his place of business. Every article of our code means protection to your investment. Buy where you see this code, the sign of your assurance."

Remaining 12 ads in the series were smaller—2 cols. by 5 in.—and based on the theme: "there's a difference between contractors," with the aim of persuading prospects to deal with association members.

This theme was carried out with such lines as: "there's a difference

between a strike and a hit,"—"between blondes and brunettes,"—"between milk and cream."

Adds Miss Cooley: "We had a working agreement with the newspaper, though not a contract, which provided that ads of any association members would be placed next to the association's ads.

"We are planning a similar campaign this year, starting in early spring. This campaign will perhaps be along the lines of urging prospects 'to get your air conditioning

installed before the rush while manpower and materials are immediately available," she explained.

"One ultimate aim of our advertising is to educate customers to pay for high quality installations and to buy in winter and spring as well as in summer.

Other advertising of the Richmond association includes listing in the telephone book "yellow pages" under two classifications: "air conditioning contractors" and "refrigeration equipment."

The association pays for the headings while the members pay for their own listing underneath.

### Good Public Relations

Another important phase of the association's activities is furthering the industry and the contractor members through publicity. The Richmond group has done well on this score, too.

"It's absolutely necessary to have the cooperation of local newspapers," emphasizes Miss Cooley, and she adds: "The majority of business editors are interested in that kind of news and they've all cooperated fully with us."

In discussing the public relations work done by the Richmond contractors association, William Bien, business editor of the Richmond News Leader, offers some sound advice that would apply to any association almost anywhere.

"Don't try to write up your information in the usual news story form," he cautions, "just jot down the facts. Most amateur newspapermen botch up the story. Give us the facts and we'll write it up in our own style. After all, that's what we get paid for. [Amen.]

"Very often people fail to send in



ALTHOUGH this looks like the typical result of a photographer's posing a model, it's actually the way Miss Cooley answers the phone. To save expenses for the Richmond association, she shares a phone that's on another desk.

meeting notices, etc., because they think they can't write. They don't have to be able to write.

"It's my very firm conviction," Bien adds, "that if you can produce a feature story and mention the news (Concluded on next page)

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Watch for  
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## Careful Office Procedure Can Cut Costs--

(Concluded from preceding page) incidentally, you can get more reader interest."

As with most associations, the Richmond group meets once a month—every third Monday night, and for this Miss Cooley tries to have a "planned meeting featuring speakers discussing not only subjects concerned with refrigeration and air conditioning technique but those of interest to businessmen—tax problems, business trends, cost of doing business, insurance, and the like.

"We definitely underplay the technical side of the business," she declares.

### Change Meeting Place

Incidentally, in connection with the monthly meetings Miss Cooley believes that a contractor group or similar groups should not try to hold their regular meetings at the same place every month.

"Shop around," she suggests. "Then the food will be different and may have a different appeal for different members. Also, this is fairer to contractors who number restaurants and hotels among their customers and prospects. Eating at the same place every month might lead to charges of favoritism."

As a further incentive to regular attendance at the monthly meetings, the association has attendance prizes at each meeting.

Between meetings members are kept informed of association activities and future plans by a weekly newsletter sent out by the secretary.

Called the "Tell You Gram," the heading of this newsletter resembles

a telegraph blank, but it's mimeographed on legal size paper.

"The extra length of legal size paper compared with the conventional sheet lets you get in considerably more news," Miss Cooley explains.

The newsletter, which goes out first class, also serves as a meeting notice and with it is included a return postcard.

"Occasionally, as the need arises, we get out special bulletins, but we try to hold these to a minimum to save expenses," she adds. "Also, contractors are often too busy to read all their mail, particularly if they suspect all they're getting is just chatter. By limiting our mailings, the contractors know when they get something from the association in the mail it's something important they should read."

The weekly "Tell You Gram" goes out to both contractor and associate members, but as a rule it's not sent to prospective members.

### Make Personal Calls

"We think it's better to make personal calls on prospects rather than simply to depend on sending them newsletters and meeting notices," explains Miss Cooley.

Although Miss Cooley has a good background in association work and is also assisting in activities of the state locker plant operators association and a Virginia food dealer group, her formal education was concentrated on fashion design. A native Richmonder, she attended Stephens college and William & Mary.

"But how I ever got into trade association work still amazes me."

## Not Just for Comfort

### Ventilation In Atomic Energy Plant Is Matter of Life and Death, ASRE Hears

SEATTLE — Ventilation at an atomic energy plant isn't merely a matter of putting fresh air in a building—it's practically a matter of life and death.

That's what Thomas G. Marshall told the Northwest section of the American Society of Refrigeration Engineers here recently. Marshall, a General Electric Co. mechanical engineer at Hanford, told about the unusual problems a ventilation engineer faces at a plant handling vast quantities of radioactive materials such as the Hanford plant G-E operates for the AEC near Richland, Wash.

Marshall explained that ventilation plays a vital role in preventing workers from breathing poisonous or radioactive materials. He also pointed out that special provisions have to be made in the ventilation systems so that people in the surrounding countryside won't be exposed to this dangerous material.

The ventilation requirements of a plant like this "are fundamentally those of the chemical industry with the addition of severe hazard imposed by the presence of radioactive materials," he said.

Three types of equipment have been developed to accomplish the kind of ventilation that prevents the "undesirable movement" of radioactive materials in the air, according to Marshall.

He listed them as hoods or canopies to closely control the movement of air around dangerous materials, ducts capable of carrying away contaminated air without concentrating the harmful materials at any one point,

and equipment to collect the radioactive contamination before the air is put back into the atmosphere.

A hood is simply a box in which work with poisonous or radioactive material can be carried on without danger of spreading harmful materials. By constantly pumping air out of the hood and carrying the contaminated air away, air moves from the room into the hood and airborne contamination can't move into the room.

The ducts carrying contaminated air have to be built so that corrosive chemicals won't collect in elbows or cracks.

Usually, filters are used to take the contamination out of the air before it is released. This air cleaning process has to be so thorough that, Marshall said, it "presents filtration requirements unheard of only a few years ago."

Marshall pointed out that the materials used in a ventilation system involving radioactivity are a vital consideration.

"Stainless steel has been used in large quantities throughout the systems with a great deal of success," he said. Stainless steel resists corrosion by chemicals, isn't scratched or worn easily, and doesn't pick up contamination. But it costs so much that "a lot of effort has been expended in developing suitable substitutes."

He said that a lot has been learned about using plastics that resist corrosion and contamination. One

method that has been developed is to put "strippable" plastic coatings on low-cost metal ducts. When the coating becomes damaged or contaminated, it can be stripped off and replaced.

Marshall added that stainless steel is still the best material in many of the process operations.

A graduate of Oregon State College, with an M. S. in Mechanical Engineering, he was on the faculty there from 1947 until 1951. At that time Marshall joined G-E at Hanford as a supervisor in the Technical Personnel Section. Until his transfer to the Engineering Department in June of this year, he was in charge of a group recruiting technical personnel from colleges and industry for employment at the Hanford Atomic Products Operation.

### Trane Names Clemons to New Office In Pensacola

LA CROSSE, Wis.—Appointment of Marvin R. Clemons to a new branch sales office in Pensacola, Fla. has been announced by The Trane Co.

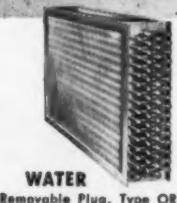
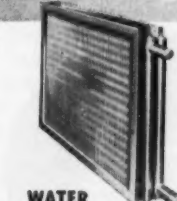
The Pensacola sub-office will operate in conjunction with the Birmingham, Ala. sales office. Clemons is a graduate of Louisiana State university and was formerly associated with the firm's New Orleans sales office.

### Springfield, Ga. Bank Cooled

SPRINGFIELD, Ga.—This city has its first air conditioned building. The Exchange Bank of Springfield recently completed a remodeling program that included installation of air conditioning equipment.

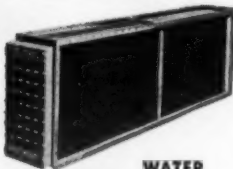
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### Torrington Completes New Factory Addition

TORRINGTON, Conn.—The Torrington Mfg. Co. has completed a 48,000-sq. ft. addition to its facilities for manufacturing fan blades and blower wheels.

The new, single-story addition is fully air conditioned and equipped with fluorescent lighting throughout. The current expansion program is the local firm's fifteenth since the early 1900's and the seventh since 1940. Plant employment has increased from an average of 283 persons during 1940 to more than 1,200 today.

Subsidiaries in Van Nuys, Calif., and Oakville, Ont., Can., have also been expanded to meet the increasing needs of the industry.

Torrington, which also produces spring coiling machines and auxiliary mill machinery, currently manufactures more than 325 different fan blades and blower wheels for all types of heating, cooling, and ventilating units.

### W. J. Stewart Appointed Kaylo Div. General Mgr.

TOLEDO—Appointment of William J. Stewart as general manager of the Kaylo Div., Owens-Illinois Glass Co., has been announced by Carl R. Megowen, Owens-Illinois president.

Stewart succeeds J. Gordon King who resigned recently to become vice president in charge of manufacturing for Plax Corp., Hartford, Conn. Four years ago Stewart was appointed chief industrial engineer in the Owens-Illinois Administrative Div.

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## Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Thermometers In Refrigeration Service (5)

The only thing that a refrigerating system does is to remove heat and thus produce refrigeration. It may also be used to control humidities, but this is incidental to and a result of its main function. More accurately, the refrigerating system moves heat from one place (the evaporator) and puts it some other place (mainly the compressor head and the condenser). In between these two extremes of temperature—the cold evaporator and the hot condenser—there are gradations of temperature in the lines, receiver, controls, etc.

Although it is the temperature of the cold evaporator that we are mainly interested in, we should be familiar with the normal and abnormal temperatures of the other parts of the system, for they are clear indications of how effectively and how efficiently the system is operating. If properly understood and used, they are revealing symptoms of what may be wrong with a system that is not operating properly.

An experienced service engineer, who understands the processes that are going on inside the refrigerating system, can often learn a great deal about how well a system is operating and what is wrong with it just by feeling the different parts of the system with his hand, although he can determine much more accurately by using thermometers. Nor is feeling the temperatures of parts of the system an effective substitute for gauges to determine the pressures, but even the temperatures as determined by feel often make an effective, quick, preliminary survey of the situation, that can save a lot of time.

#### FREEZER PROBLEM

For example, a service engineer is called on a freezer using a capillary tube system. He feels the food and finds it beginning to get soft, especially the ice cream and the frozen strawberries. He puts a thermometer in contact with the foods and finds the temperature up to an average of about 12° F.

He feels the suction line leaving the evaporator and finds it rather warm—warmer than it should be, even considering that there is a heat exchanger between the evaporator and where he felt the suction line. From this, he at once knows that the evaporator is not being fully fed with refrigerant.

At this stage it is not necessary, but if he wished to do so he could clip a thermometer on each side of the heat exchanger. Between the heat exchanger and the evaporator the thermometer should read about -5° or lower; with a temperature rise of perhaps 15° to 20° through the heat exchanger, depending on its size and type.

He feels the compressor head and

the top of the condenser; neither are as hot as they should normally be, showing that the compressor is not pumping its normal amount of gas. He feels the liquid line just beyond the outlet of the condenser and finds it warmer than it should be, indicating that hot gas from the condenser is getting into the liquid line.

All of these checks, just by "feel," point to lack of charge in the system. Then he puts on the gauges and finds the suction pressure and the discharge pressure both abnormally low. This confirms his preliminary diagnosis by feeling the temperature of the lines, compressor, and condenser. The system is low on charge.

The freezer had been holding a good temperature of about zero to -5° until recently, so he can be sure that a leak has developed somewhere in the system, and his job is to find it. It would be no use to simply add a few ounces of refrigerant. That might get by on an expansion valve system, where he could add enough reserve to run the job for a while, despite the leak.

But a cap tube system has a "balanced charge." He might be able to add a few ounces of refrigerant—probably not over a half pound—but within a day or so, or a few days at most, there would be another call. So he has to find the leak and repair it; then add enough refrigerant to get the exact charge in the system. This would be indicated when there was a frost line just out of the cabinet when the machine stops after a normal run, and with the thermostat satisfied.

Under these normal running conditions, the head pressure would be that pressure corresponding to the room temperature plus about 35°. The suction pressure would first rise abnormally high to correspond to the warm evaporator, and then go down to about 0° gauge, the exact amount depending upon the design of the make of freezer.

The compressor head should be hot and so should the top of the condenser. On cap tube systems, the liquid line and the suction line are soldered together for a part of their lengths, but that portion of the liquid line between the condenser and where the suction line joins it, should normally be at very little above room temperature.

#### ANOTHER SIMILAR FREEZER

On another freezer also using a cap tube system, he found similar conditions; the food a little soft and the suction line leaving the evaporator rather warm, again indicating that the evaporator was not being fully fed with refrigerant. To his hand the compressor head and condenser felt warmer—almost normal. The liquid line leaving the condenser also felt about normal, thus indicating that it had no hot gas in it from the condenser. This was a preliminary indication that the system had enough charge in it.

However, the liquid line had a strainer in it. He felt of it and the strainer and the liquid line beyond—that is, down stream—felt quite cool, much cooler than the liquid line

ahead of the strainer. This caused him to suspect that there was a partial stoppage in the strainer.

He clipped a thermometer to the liquid line a few inches ahead of the strainer and another to the liquid line just beyond the strainer, and they showed temperatures of 93° and 62°, respectively, a difference of 31°. This was too much; he would have disregarded a temperature difference of 5° or less, as indicating a normal pressure drop through the strainer.

This was a clear indication of partial stoppage in the strainer. To further check, he put on the gauges. The discharge gauge read 140 pounds per square inch (p.s.i.) which was about normal for the 75° temperature. The suction gauge read 9 in. vacuum; whereas, normal for that freezer would have been about a pound or so.

The gauge readings confirmed his preliminary diagnosis arrived at from the "feel" of the temperatures of the lines, compressor, and condenser. He then felt certain that the trouble on this second freezer was due to the partial stoppage of the strainer, so he pumped the job down and removed the strainer. However,

before removing the strainer he broke the vacuum back up a couple of pounds above zero gauge, so that when he opened the liquid line he would not get moisture into the system.

Although there had been no indication of moisture, he replaced the strainer with a small combination drier-strainer, just to be sure to catch any moisture that he might have let into the system when he opened it, or moisture that might have come out of the evaporator due to its being warmed up somewhat.

In changing the strainer he had lost a little charge, so he added about a quarter or half pound by guess, put on a recording suction pressure gauge, and went on some other calls. A few hours later he came back, found the job had pulled down and had been cycling.

However, the frost was coming out a little too far on the suction line at the end of a running period, showing that he had added a little too much refrigerant. He purged some out until frost just showed on the suction line outside the cabinet.

That night, back in his shop, he cut the old strainer open to see what was in it. He found the inlet side of the strainer pad was covered with a gritty, dark brownish powder that seemed to be just ordinary dirt. If the strainer had not caught it, this dirt would probably have stopped up the capillary tube.

#### SYMPTOMS OF A STOPPED CAPILLARY TUBE

Suppose that on this second freezer, the service engineer had found the conditions about the same as previously described, but with no percepti-

ble pressure drop in the strainer as indicated by the temperature drop across the strainer; but with the compressor head and condenser much cooler than normal, indicating that the compressor was pumping very little gas.

Moreover, under these conditions, the gauges showed only 96 p.s.i.g. head pressure and a 22-in. vacuum on the low side. These symptoms would definitely indicate that the capillary tube itself was stopped up, either from dirt or other foreign matter, or from moisture.

In such a case he probably would have tried to warm up the capillary tube and blow back through it to open it. If he were successful in clearing it, he would have put on a new strainer-drier in the liquid line just ahead of the capillary tube to prevent a repetition of the stoppage, rechecked the charge, etc.

If he were not successful in clearing the capillary tube, obviously he would have had to replace the capillary tube with another of the same size and design.

(To Be Continued)

#### Business Name Filed

BUFFALO—A business name has been filed in the Erie County Clerk's office for the Electrical Appliance Repair Service, 4 W. Fleming St. here, by John A. Hinchey and Wallace Wassik.

#### JUST ASK US

For "easy-to-get"  
product information...  
use coupon on "What's"

## Sid Says:

# When you want to make sure of positive control...use White-Rodgers

**White-Rodgers Hydraulic-Action controls** give you full-range accuracy comparable to that of a fine thermometer. Their extra sturdy construction assures long reliable performance.

Easy adjustment... permanent calibration... positive settings... consistent differentials... are a few more of the reasons Hydraulic-Action controls are preferred by men who want to "make sure" of their installations.

**Key type —**  
Key (screwdriver) type adjustment for installations where changes in settings are made infrequently.

**Knob type —**  
For installations where frequent changes in temperature settings are desired.

**Rugged — Long Lasting —**  
Because of the tremendous power of Hydraulic-Action, the switch is built of heavier, longer wearing parts. The snap-action provides positive closure of the fine-silver contacts and insures long contact life.

**For Any Job —**  
There is a White-Rodgers control for practically every need... ice cream cabinets—soda fountains—milk or beverage coolers—fruit storage rooms—farm freezers—walk-in boxes—quick-freeze cabinets—floral display cases—vegetable and meat display cases—etc.

**High Electrical Ratings —**  
13 Amps. at 115v., 6.5 Amps. at 230v. Handles most applications without relays or motor starters.

**Selective Range —**  
Provides a convenient method of adjusting temperature within a selected part of the entire range of the control.

**Manual Restart —**  
Particularly desirable on applications such as milk coolers. Push-button permits manual starting of compressor before warm milk is put into cooler.

## WHITE-RODGERS

### Controls

FOR REFRIGERATION  
HEATING AND  
AIR CONDITIONING

**ROTARY SEAL Replacement Units**

Available in a complete range of sizes—including larger models for use in Commercial and Semi-Commercial Compressors, like those listed below. 23 years performance proof!

BAKER • BRUNNER • CARRIER  
COLDSPOT • COMLAND • CURTIS  
FRIGIDAIRE • GENERAL ELECTRIC  
KELVINATOR • NORGE • PAR  
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2026 NORTH LARRABEE ST.  
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CANADIAN AGENT: 2025 ADDINGTON AVE., MONTREAL 28, QUEBEC

**Let SID help you!**  
Fill in and mail the coupon below TODAY! It will bring you a series of service bulletins helpful to you in making your installations.

**WHITE-RODGERS ELECTRIC CO.**  
Dept. 21F  
1213 Cass Ave., St. Louis 8, Mo., U.S.A.

Gentlemen: Please send me your information bulletins.

Name \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Kind of Work \_\_\_\_\_ Birthday (DAY) (MONTH) \_\_\_\_\_



## SLANTS on Service

"Slants on Service" is a handy "package" devised by the NEWS for its busy readers.

### Don't Mix Refrigerants

Will the addition of "Freon-12" to "Freon-22" prevent congealing of oil at low temperature?

According to Kinetic Chemicals Div. of du Pont, the two refrigerants shouldn't be mixed because "Freon-12" has a carbon tetrachloride base while "Freon-22" has a chloroform base.

Proper size suction lines and the right type of evaporator will insure return of oil to the compressor, thus avoiding the problem of oil congealing at low suction temperature.

### Tag Systems with Alcohol

If methyl alcohol is put into a system, it might be a good idea to hang a tag to that effect on the unit.

Otherwise, if a drier were installed later by a serviceman who didn't know alcohol was present, the system might be worse off than before. Alcohol will displace moisture that the drier picks up.

### WHY WAIT?

Get your new product info pronto. Use coupon on "What's New" page this issue. Use Key No. for fastest service.

## Food, Card Games Lure Employees

### Service Firm Gets Top Attendance at Its Classes by Making Them Social Events

ST. LOUIS—By setting up a program of classroom lectures on every phase of refrigeration service, and setting up each class so that it is attractive to its mechanics, City Refrigeration Service Co. here has substantially increased its volume.

This policy goes back many years, according to Jim Daniels, head of the firm, which is now one of the largest in the midwest. With 16 mechanics on the payroll operating at top speed most of the year, City Refrigeration Service has seen the value of "get acquainted" service classes and, therefore, schedules an average of four a year.

A large room on the second floor is available as a classroom. Daniels negotiates with manufacturers and their representatives as speakers, confirming long in advance to guard against disappointments. No classes are scheduled during the summer months when operations are at peak. Topics include better servicing of refrigerators, freezers, commercial equipment, and package air conditioners.

To provide as much interest as possible, Daniels arranges for "knock-down models" of whatever piece of equipment is under discussion, and encourages the lecturer to bring along mock-ups, break-down samples, etc., which can be passed around from hand to hand, and which will illustrate the servicing methods.

By far the most important element, in getting maximum benefit from such training for his servicemen is getting a 100% attendance. Therefore, Daniels long ago adopted the policy of making each such class an "evening out" for the men, serving refreshments, often complete meals, playing host at a card game afterwards, or providing other entertainment. A City Refrigeration Service mechanic can depend upon a relaxed, pleasant evening.

In the past, all meetings have been based on service, but the firm has touched on the sales angle by asking sales representatives to explain points of operation and service which are being used to sell the equipment. This, in turn, helps the mechanic to see the refrigeration equipment from the customer's standpoint.

Top meeting of the year takes place just before Christmas, when Daniels reports on policy changes, the company's business status, and distributes bonuses and gifts earned during the year. This is always followed by a party with the mechanics' families invited.

"Of necessity, most such training classes take place on the employee's own time," Daniels pointed out. "Therefore, in order to get really whole-hearted cooperation and a full attendance, it is up to the firm to make such meetings enjoyable."



HENRY HAND, right, was recently elected president of Delta Refrigeration Wholesalers Association. Other officers elected were: Howard McAdams (not in picture), vice president; R. E. Warwick, left, national director; and Hazel McQuiston, center, secretary-treasurer.

### Hand Elected President of Delta Wholesalers

MEMPHIS—Henry Hand, of Henry Hand Supply Co., Dothan, Ala., was elected president of the Delta Refrigeration Wholesalers Association during the group's recent annual meeting at the Buena Vista in Biloxi, Miss.

Howard McAdams of Enochs Sales Co., New Orleans, was elected vice president. R. E. Warwick of Plumbing Wholesale Co., Jackson, Miss.,

was re-elected national director, and Hazel McQuiston, formerly with United Refrigeration Supply Co., Memphis, and now owner of Hazel's Flower's, Memphis, was re-elected secretary-treasurer of the association.

A. Starr Hull, executive secretary of the Refrigeration Equipment Wholesalers Association, was guest speaker at the meeting.

### Surge Comparison Tester Helps Airtemp To Eliminate Electric Motor Failures

DAYTON—Electric motor failures have been virtually eliminated in Chrysler Airtemp's air conditioners and customer satisfaction has been appreciably increased, Airtemp Div. of Chrysler Corp. reports.

Because Airtemp produces many sizes and models of air conditioners, the company purchases many sizes of motors, and from several vendors. Since most of Airtemp's equipment is hermetically sealed, ordinary methods of motor checking could not be used until after the entire compressor was assembled.

Even then these methods failed to detect winding flaws that led to later burn-outs. Prior to this year, the percentage of electrical motor failures due to poor winding had at times reached 2%. And the failures occurred after the compressor was completely assembled.

A surge comparison tester was installed to check motor windings before assembly. With the motor under field test conditions, the surge comparison tester suddenly discharges an impulse from a condenser into the

motor windings. The discharge is for a short duration and is repeated at a 60 impulse per second rate.

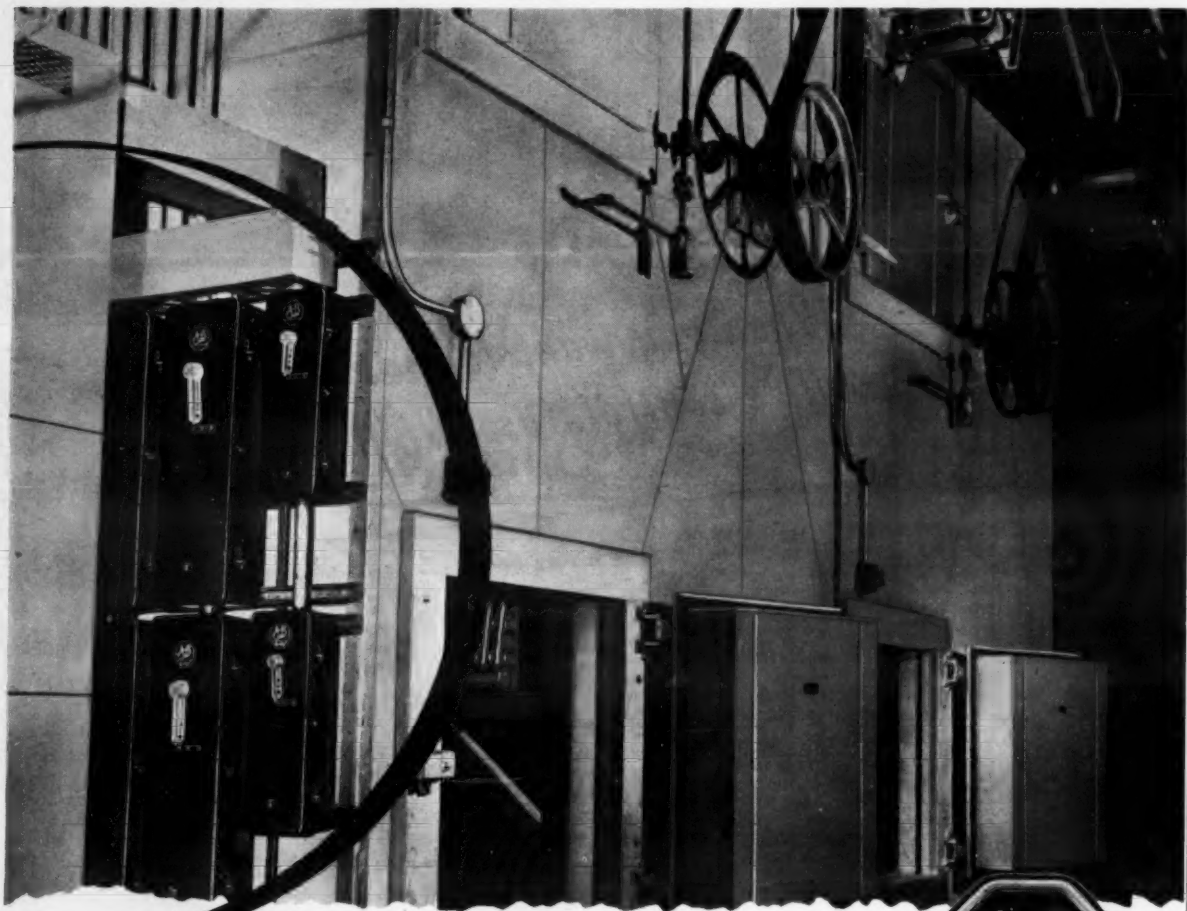
Any differences in the phase windings, which ultimately could lead to motor failure in the field, are projected in double trace on a cathode ray oscilloscope. Defective motors are rejected before the compressor is completely assembled.

Airtemp engineers feel that the surge comparison tester paid for itself within a few weeks, with the before-assembly elimination of many service problems directly traceable to motor failure.

### Raleigh Firm Gets Charter

RALEIGH, N. C.—General Equipment Co. here has been granted a charter by the Secretary of State to manufacture, erect, and install air conditioning, heating, and plumbing equipment.

Authorized capital stock is \$100,000. The incorporators were B. F. Carter, Rosemary J. Carter, and Broadus Wilson, all of Raleigh.



Exterior of two 15 hp blowers, part of a battery of eight, operated by Allen-Bradley control, used to refrigerate the hardening room in the Sealtest ice cream plant, Pittsburgh.



## ALLEN-BRADLEY COMBINATION STARTERS

*operate blowers in ice cream plant!*

Simplicity of design is the top requirement of a dependable motor starter. The simple solenoid action of Allen-Bradley automatic starters . . . enclosed arc hood . . . maintenance free, double break, silver alloy contacts . . . reliable solder pot overload relays . . . white cabinet interior . . . bonderized cabinet finish are outstanding features that you secure at no added cost when you buy Allen-Bradley solenoid starters.

Over the years, A-B starters have rendered such continuously reliable service to the air conditioning and refrigeration industry that they have become "an accepted standard."

Allen-Bradley Co., 1313 S. First St.  
Milwaukee 4, Wis.

### Why are Allen-Bradley Automatic Starters so Popular for Refrigeration and Air-Conditioning Service?

simple design



Only ONE moving part . . . the secret of trouble free operation.

maintenance free contacts



The double break, silver alloy contacts never need cleaning or filing — a timesaver and money saver for you.

dependable operation



There are no pivots, pins, hinges, or friction parts to cause trouble.

reliable overload relays



Provide continuously reliable protection to man, motor, and machine . . . your guarantee of trouble free operation.

ALLEN-BRADLEY QUALITY MOTOR CONTROLS

A doctor's clinic in Mississippi



A restaurant in Virginia



They All Use



Unit Air

Conditioners



A confectionery and gift shop in Pennsylvania



An insurance office in Arkansas

Whether you operate a store, office, beauty parlor, hotel, theatre, club, tap room, factory, bank, or any similar business, you can do it better—give better service and earn greater profits—with a Frick air conditioner. These superior units, built for the discriminating trade, are praised alike by customers, employees, and owners. Made in 3, 5, and 7½ horsepower sizes, there's one to meet your needs. Ask the nearest Frick Distributor or Dealer for your copy of Bulletin 522.



Unit cooling a store

**FRICK Co.**  
WAYNESBORO, PENNA. U.S.A.  
Also Builders of Power Farming and Sawmill Machinery



## AIR CONDITIONING (Year-Round Residential)

### Janitrol Div. Shows New Summer Air Conditioner And Heat Exchanger

COLUMBUS, Ohio — Janitrol Div. of Surface Combustion Corp. recently ended six days of sales meetings at the company's plant here with the announcement of two new products in the firm's line of home comfort equipment.

The products are a summer air conditioner and a new heat exchanger for its deluxe winter air conditioner. The summer air conditioner is designed to be connected with existing winter forced air conditioners, utilizing the same ductwork. A hermetically-sealed compressor allows the unit to be removed completely and a new unit installed in a matter of minutes for easy service, according to the company.

The air conditioner will be sold either separately or with the new "Dura-tube" winter air conditioner in a "Win-Sum Twin" combination. The summer unit is available in three models, 2-ton, 3-ton, and 5-ton cooling capacity units.

The Dura-tube heat exchanger is a combination of Janitrol design and a special process developed by the National Bureau of Standards during World War II. The process protects the exchanger from damage by temperatures up to 1,200° F. and from cracking by quick immersion in water while heated to the same temperature, the company said. The Dura-tube armored heat also resists destructive combustion gases.

Special sessions to familiarize Janitrol district representatives with new sales promotion materials and a new advertising campaign featuring dealer film strips and an institutional type sound movie were conducted under the general direction of C. C. Owen, sales promotion manager; William J. Grover, marketing manager; and Harry C. Gurney, Janitrol Div. sales manager.

### Charlotte Refrigeration Firm Granted Charter

CHARLOTTE, N. C.—The Woodward Warren Refrigeration Co., Inc. here has obtained a charter from the secretary of state to deal in, wholesale and retail, all types of air conditioning and refrigeration equipment.

Authorized capital stock is \$20,000; subscribed stock, \$13,000. Incorporators: Murray F. Woodward, Greenville, S. C., and Floyd A. Price and Mrs. Bobbie B. Price of Charlotte.



### THE ORIGINAL, PATENTED CROSS-FIN COIL

The refrigeration coil that changed an industry stands today unchallenged for performance, user satisfaction and lasting durability. Made from the finest materials by skilled craftsmen under exacting standards, every Larkin Coil features imbedded fin-to-tube contact, swaged connection, silfos welded construction, and staggered tubing. Write for complete details.

Manufacturers of the original Cross-Fin Coil  
• Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils  
• Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

WATCHDOG OF THE NATION'S FOOD SUPPLY

**LARKIN COILS**  
219 MEMORIAL DR., S.E., ATLANTA, GA.

### Home Air Conditioning Attracts Many to Chattanooga Show

CHATTANOOGA, Tenn.—In what is claimed to be the first all-electric home show in the country, residential air conditioning attracted considerable public interest last fall.

The Electric Home Show was sponsored by the Chattanooga Association of Home Builders, the Electric League of Chattanooga, and the Electric Power Board of Chattanooga. C. Bert Osborne, promotion manager for the utility was show chairman.

Four different residential air conditioning systems were displayed at the event which drew approximately 100,000 people in five evenings and one afternoon. They were the Chrysler Airtemp air-cooled unit, the Carrier Weathermaker, the General Electric Weathertron, and the Lennox air-cooled suspended unit for installation in a Lennox furnace.

Exhibitors declared that local builders have practically accepted air conditioning as a must for their new homes. Many residential cooling systems were installed during the past summer and greatly increased volume is expected in 1954.

Though there was no official model home for the show, many builders were showing their new air conditioned homes to the public.

A special supplement of the *Chattanooga News-Free Press* carried a number of advertisements and editorial stories telling the public about the advantages and growth of home air conditioning.

### Snyder Heads Residential Division of York-Shipley

YORK, Pa.—R. B. "Barney" Snyder has been appointed manager of the residential division of York-Shipley, Inc., manufacturer of automatic heating and home air conditioning equipment. S. H. Shipley, president, announced recently.

In this position, Snyder will direct the activities of York-Shipley's nationwide distributor and dealer organization. The company plans to extend and strengthen their distribution during 1954.

Snyder has been with the York-Shipley organization for the past 11 years, starting as an assistant purchasing agent during the war. After the war, he shifted to sales.

Starting as a retail salesman for York-Shipley's retail branch in York, he has successively been retail sales manager, wholesale sales manager for Shipley cooling and heating division, regional sales manager for the middle Atlantic region, and special assistant to Shipley.

### Heat Pump Described In Bulletin by Westinghouse

HYDE PARK, Mass.—The all-electric heat pump is described in a four-page bulletin available from Westinghouse Electric Corp.

A complete explanation of the heating and cooling cycles of the unit is presented in the bulletin, including schematic flow diagrams of the refrigerant and air.

Each of the many new features of the heat pump is described, such as the elimination of flame-type fuels, water connections, and the usual seasonal adjustments and maintenance.

### Genuine Joe says: "Stock WAGNER STANDARD ROTORS"



A stock of genuine Wagner interchangeable replacement rotors makes rotor replacement a simple 1-2-3 job... and the exclusive "tell-all" label shows the interchangeability of rotors within a given horsepower on Wagner motors.

**Wagner Electric Corporation**  
4471 PLYMOUTH AVENUE, SAINT LOUIS 14, MO., U. S. A.

## Specialty-Built Outside Machinery Room Houses 'Weathertrons'

### Two 3-Hp. Heat Pumps Keep 2-Story Dallas Home Comfortable Year-Round

DALLAS — Formerly heated with floor furnaces, the two-story home of Mr. and Mrs. Ben R. Weber in suburban Highland Park is now air conditioned the year-round by two 3-hp. heat pumps.

How the air conditioning system was installed was described recently by Art Durbin, vice president of Texas Distributors, General Electric distributor in Dallas. The installation was made by F. D. Royse Heating Co., Dallas, G-E dealer.

"To keep the Weber house air conditioned the year around," Durbin reported, "we used two G-E 3-hp. 'Weathertrons' with 6 kw. of auxiliary heaters in each unit."

"We installed this equipment in a machinery room which was constructed just outside the rear kitchen wall. In order not to block the view from the kitchen window, we had to lower the machinery room floor approximately 30 in."

"The air distribution system for the first floor consists of G-E 'Air-Wall' registers located near the floor around the outside walls. On the second floor we installed ceiling outlets, distributing the air toward the outside walls."

"These two types of supply systems helped to keep the cutting, patching, and painting to a bare minimum."



SPECIALY BUILT machinery room in back of Weber home houses G-E "Weathertrons."

"Formerly the Webers were heating the house with floor furnaces located in the first floor. Gravity flow ducts ran in the partitions to the rooms on the second floor. We used this old heating system for our return air supply, merely connecting ducts from each floor furnace pan, and returning the air to the new machinery room."

"The loads on the first and second floor were almost identical, thereby making this job a perfect 2-zone system. By locating a thermostat on each floor, the occupants can control

the temperatures independently of each other.

"One of the big factors that helped us in obtaining this job was the fact that no cooling tower was necessary."

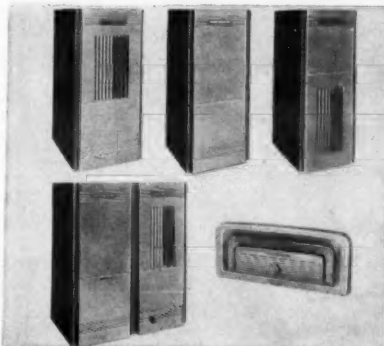
"To be sure that the Weathertrons give Mr. & Mrs. Weber the ultimate in satisfaction and performance and the lowest possible operating cost, we found it necessary to insulate the floors and the outside walls."

"The design conditions of the Weber house are as follows: Winter: Outdoor 10°; indoor 75°. Summer: Outdoor 100°; indoor 75°."

## HOME HEATING and COOLING

# 6 REASONS why G-E is your Franchise with a Future

Now is the time to get into home air conditioning... and a G-E franchise can put you on the road to profits!



**MOST COMPLETE LINE** of furnaces, boilers and cooling units in the business. Over 220 different year-round air conditioners from a few basic units! And G-E's Air-Wall® System gives you a big selling plus!



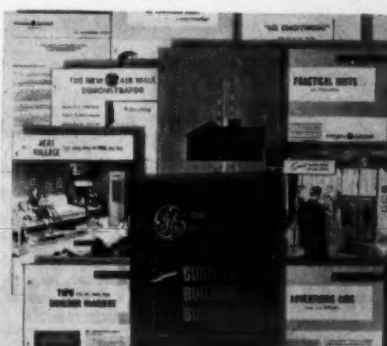
**FACTORY TRAINING** for your own men right in the G-E factory school in application, service and sales for the entire G-E line. When you start off your dealership, you'll already be an "old hand" at the game!



**NATIONAL ADVERTISING** by G. E. pulls in prospects, boosts your prestige. Over 10,000,000 people will be reading G-E Home Heating and Cooling ads this year—thousands of them right in your area!



**SALES PROMOTION SUPPORT** by G-E offers power-packed selling aids that help seek out prospects and sell those who "just can't make up their minds." G-E ad mats, literature, displays and signs clinch sales!



**SPECIAL BUILDER PROGRAM** developed by G. E. includes "Guide to Builder Business." Packed with merchandising aids, it tells you about sales presentations, model homes—all you need to know to sell builders!



**PUBLIC ACCEPTANCE** of the G-Name is unequalled. In a nationwide independent survey of American industry leaders, G. E. enjoyed more positive good will than any other company. And you can get on the G-E team!

G. E. gives you 3D for 3M! G. E. heating and cooling units operate in all 3 Directions—upflow, downflow and horizontal—so that you can serve 3 Markets—new construction, replacement, modernization—and make the most profits. You and your customers have a choice of oil or gas heating and cooling, of any size to fit any job!

G-E Air-Wall® System is a pre-engineered distribution system, ideal for both heating and cooling. G-E Sealed-in-Steel refrigeration units assure long life...are backed by a G-E 5-Year Warranty.



**AIR WALL**  
HOME HEATING AND COOLING

\*Reg. Trademark General Electric Co.

## GENERAL ELECTRIC

Mail the Coupon Today —

for more details on how you can have a "Franchise with a Future."

General Electric Company, Home Heating and Cooling Dept.,  
Sec. ACR-2, Bloomfield, N. J.

Please tell me more about my opportunities with a G-E Home Heating and Cooling Franchise. My principal business is...

Name.....

Company.....

Address.....

City..... County..... State.....



# How Locker Operator Can Profit with Food Plan

1. Sound Selling Program Puts Freezer In the Home
2. Good Financing Plan Assures Fewer Problems
3. Home Economist Improves Customer Relations

CHICAGO—Most locker plant operators are definitely interested in selling food to freezer owners and quite a number have tried (or are considering) freezer-food plans.

This was indicated during a panel discussion on the subject at a National Frozen Food Locker meeting.

Locker operators, freezer manufacturers, and a banker exchanged views and offered suggestions.

"Every time we make a freezer sale we're collecting several years' locker rent in advance," declared H. C. Page of Keokuk, Iowa in describing "How to Sell Freezers and Food in a Small Town."

"It's the freezer sale that made the payoff for us," he emphasized. Page also cited the following as basic requirements for any locker operator handling the freezer-food plan:

1. He must have good quality frozen good at a good price.
2. Sell a nationally known freezer "on which the manufacturer will back you up."
3. Have a reliable source of good credit information.
4. Get a good sales manager.
5. Set up a crew of salesmen that "won't over-estimate savings."
6. "Beware of prospects who can't pay 10% down."

A source of financing is essential,

and on this point Page commented, "the banker is harder to sell than the customer."

He indicated that credit was a most important problem "so we screen all prospects even before the salesmen call on them. When a sale is made we require three references of time payment purchases of major appliances. At least two of these references have to give favorable reports."

"One pitfall that is almost impossible to foresee in checking credit is divorce, and when that happens the freezer usually comes back."

One locker operator who sold more than \$100,000 worth of frozen foods to freezer buyers during the past year by offering a food plan to three appliance dealers has now "almost definitely decided to go into freezer sales ourselves."

"The dealers are either hot or cold on freezer sales so we can't depend on a constant steady volume of food orders," explained Charles Rupp of Lemoyne Ice & Cold Storage, Lemoyne, Pa.

The initial food order supplied by Rupp is intended to last four months so customers are contacted every 3½ months.

"Thus far we've averaged better than 85% reorders," he said.

Another speaker on the panel,

James Culver of La Mesa Frozen Foods, La Mesa, Calif., explained that "we finance meat and foods in lockers, but we don't favor financing commercially frozen foods for locker storage."

Culver stressed the point that locker operators "have to find out their customers' complaints. Although they usually won't complain to the operator himself, customers will tell employees."

His firm, he said, has greatly improved relations with customers by having a girl work in the field, discussing problems and complaints and explaining to customers how they can get the most out of their freezer and locker.

## Financing—A Major Problem

Financing—the major problem in freezer-food plan merchandising—was discussed by Kenneth Wells, vice president of American National Bank, who cited food plans as a phenomenon in modern instalment financing.

"Very poor credit risks have paid us promptly," he said. "Even people who told us they didn't save any money and they didn't like the food said they wouldn't part with their freezer. Some people apparently aren't spending money for other



HOME & FARM  
FREEZERS



things so they can keep up freezer-food payments.

Wells compared the freezer-food plan with a travel agency's making all arrangements for a person taking his first trip to Europe.

"After the first trip most people make their own arrangements. The food plan gets the freezer into the home stocked with frozen foods. It makes it easy for people who've 'always wanted a freezer' to get started," he said.

"We checked users on the West Coast and three out of five said they'd wanted a freezer all along. People wanted to be kidded into buying."

And in a Chicago suburb an executive of a dairy who, it developed, was also vice president of a bank even bought a freezer on the food plan, Wells declared.

"Just imagine this man paying list price and buying on 24-month terms," he commented.

He emphasized that "it takes an aggressive direct-selling organization for this job. This is a marriage of two kinds of business—appliances and food distribution, but unfortunately, most appliance dealers have forgotten how to sell."

## Housewife Must Learn To Use It

"The freezer is one of the few appliances you can put in a home that the housewife doesn't know how to use. The freezer is really a way of life, and you have to put that idea across."

Commenting on the sharp decline of freezer-food sales on the West Coast, Wells said there was nothing wrong there except "violation of the fundamental rules of financing."

These fundamentals require well established dealers, completed sale, check of credit, and delivery of good merchandise, he explained.

Although Wells at one point said, "you have to sell enough food to get the user through the first five or six months," he later declared, "I believe the food should be repaid in four months. Six months is too long. Most freezers won't hold that much."

"Also, I don't believe that in the long run food should be sold on time, and food financing shouldn't run beyond the second order. The owner should be able to save enough to pay cash for the second order."

As for recourse, Wells indicated that he was against it.

"Instead, we prefer holdbacks to keep the dealer interested. We lend money on the American family, not on the freezer," he declared.

## If You Are Planning To Sell Freezers—

Locker operators who are considering taking on a line of freezers received some advice from James Hufnagel of Philco Corp.

Such factors as quality, substantial construction, a latch that operates easily, a liner that's easy to clean, public acceptance of the product, convenience features, and good service facilities were cited as to top importance.

"Does the manufacturer have a stable local advertising program is another important question," Hufnagel said. "Beware of buying advertising deals because they're usually tied in with distress merchandise that's hard to sell."

"Price and discounts should be considered last. If the previous questions are answered favorably, then price and discounts aren't all-important. They are of major importance, but you can't buy a cheap product cheaply enough," he cautioned.

## Graybar In Nashville Named Amana Freezer Distributor

NASHVILLE, Tenn. — Graybar Electric Co., Inc., Nashville, has been appointed distributor for Amana freezers.

This branch of Graybar, Cincinnati district, will cover central Tennessee, plus several counties in Kentucky and Virginia, for Amana freezers.

In charge are H. B. Hall, manager and D. W. Talbot, operating manager. Other products distributed in the area by Graybar include television sets, room coolers, and sewing machines.

## Locker Operators Indicate Freezers Increase Business

ELIZABETHTOWN, Pa.—Sixty-six per cent of the members of the National Frozen Food Locker Institute participating in a public relations survey made late last spring reported that the home freezer has brought them more customers, an analysis of returns revealed.

Twenty-six per cent of the locker plants answering the questionnaire said the home freezer had made no noticeable difference in their business, and 8% reported less customers because of the freezer.

Among other things, the survey also disclosed that:

One-third of the plants replying to the questionnaire have changed hands since their founding.

Most locker plants offering food plans are in the high volume category.

Forty per cent had the same number of lockers rented as a year ago, 39% had more lockers rented, and 23% had less rented.

Purpose of the study was to learn a number of basic facts for use in NFFLI's public relations program, developed by the firm of Swanson & Dalzell in New York City.

## Freezer-Food Plan for Indians Saves Caribou

PRINCE ALBERT, Sask., Can.—A freezer food plan for Indians that operates a little differently from the commercial varieties in the United States has been developed by the Canadian Department of Indian Affairs. You can't beat it for prices—there aren't any.

It seems that the Indians of the far north have traditionally made a practice of killing as many migrating caribou—their main meat supply—as possible during the winter months. They stored these in piles buried in snow and brush. If undisturbed, these piles would last well into the summer months, providing fresh meat when the caribou herds were far away.

However, with the caribou herds dwindling away, the Canadian government has decided that this method of meat preservation was inadequate and wasteful, as many more caribou were killed than were eaten. Wolves and other animals also destroyed many piles.

As an alternative, the Department of Indian Affairs has recently constructed an 8,000-cu. ft. cold storage warehouse at Stony Rapids where the Indians can have their caribou processed and stored free of charge. As the meat will be safe and available year 'round, there will be no need to kill more animals than necessary, the government figures.

## Five Distributors Appointed To Handle Quicfrez Line

FOND DU LAC, Wis.—New distributors recently appointed by Quicfrez, Inc., have been announced by Harry Ryan, vice president and general sales manager.

The new distributors are: Baltimore Refrigeration Supply Co., Baltimore; George J. Schultz, Inc., Norfolk, Va.; Montague Brothers, Inc., South Hill, Va.; George A. Pullen Co., Denver; and B. & M. Electrical Distributing Co., Rock Island, Ill.

ELIMINATES MINERAL SCALE in most raw waters

**EVIS**

WATER CONDITIONER

(not a softener!)

WRITTEN 90-DAY MONEY BACK GUARANTEE

Dealers in principal cities:

40 Boardman Place  
EVIS MFG. CO. San Francisco, Calif.

EV-144C

See what adhesives are doing today!



Sketch of cooling tube with 3M sealer showing normal heat transfer area and extended area created by conductive compound.

## Taking the heat off a freezer

Now there's a way to dissipate the heat from freezer and refrigerator coils that is simple, effective, lower in cost than other methods.

By flowing one of 3M's new heat conductive sealers between the coils and outer shell of this home freezer, contact area is increased and the rate of heat transfer to the outer wall is greatly accelerated.

These 3M conductive sealers can be used around cooling coils to increase freezing cycle efficiency or around heat dissipation coils to

transfer heat more evenly and prevent moisture formation on the outer walls.

### See what adhesives can do for you . . .

Perhaps this 3M sealer application sparks some ideas of how a 3M adhesive product can help to solve one of your design or production problems. If so, write today for a booklet illustrating how other manufacturers have used 3M adhesives and sealers to save man-hours and cut unit costs. Address your request to 3M, Dept. 141,417 Piquette Ave., Detroit 2, Michigan.



ADHESIVES AND COATING DIVISION MINNESOTA MINING AND MANUFACTURING COMPANY

417 PIQUETTE AVE. DETROIT 2, MICH. • GENERAL SALES OFFICES: ST. PAUL 6, MINN. • EXPORT: 122 E. 42 ST., N. Y. 17, N. Y. • CANADA: LONDON, ONT.  
MAKERS OF "SCOTCH" BRAND PRESSURE-SENSITIVE ADHESIVE TAPES • "SCOTCH" BRAND SOUND-RECORDING TAPE • "SCOTCHLITE" BRAND REFLECTIVE SHEETINGS • "3M" ABRASIVE PAPER AND CLOTH • "3M" ADHESIVES AND COATINGS • "3M" ROOFING GRANULES • "3M" CHEMICALS





## RCA Room Units - -

(Concluded from Page 1, Column 3)  
built-in thermostats, pushbutton controls, and optional heating facilities.

To further strengthen RCA Victor's marketing position, the company is offering a dating plan described as "the most favorable in the industry."

Window Type	Model No.	Hp.	Hourly B.t.u.	List Price
	33	1/4	4,175	\$299.50
	50	1/2	5,085	279.50
*50 Deluxe		1/2	6,050	319.50
75		3/4	8,005	349.50
*75 Deluxe		3/4	9,010	389.50
100		1	11,900	419.50
*100 Deluxe		1	11,900	449.50

### Consoles

**Console 100	1	11,900	\$599.50
(mahogany finish—wood)			679.50
(blond finish—wood)			699.50
**Console 150	1 1/2	15,500	\$799.50
(mahogany finish—wood)			879.50
(blond finish—wood)			899.50

\*Heat pump optional for an additional \$50.  
\*\* Strip heating facilities standard on all consoles.  
†Metal cabinet.

## NARDA Scores 'Discount' Advertising - -

(Concluded from Page 1, Column 5)  
tegrity of our business is in the process of slow but sure deterioration now, unless we can get industry cooperation at all levels and put integrity back into the business. . . .

"I don't think there is any law against the manufacturer or distributor having some control over the copy used to advertise his product, and the method used to present the product to the public. There is no law to stop him from deciding what is ethical and what is unethical, and I think manufacturers might be willing to act realistically if we do."

Declaring that "the time has come for dealers to speak out in their own behalf," Broadhurst said:

"We may not be able to stop other dealers from running unethical advertising, but if there are dealers who insist on lousing up this business, then they should be made to pay for it out of their own pockets. No longer should a dealer be allowed to hide behind list price while cutting that price with 'deals' and gimmicks and get paid for it."

Broadhurst then called for "a new approach" to cooperative advertising under which dealers, to qualify for such help, would be required to omit use of specific trade-in allowances or "free" offers in advertising and to promote products.

Price cutting was also touched on by John M. Otter, vice president of Philco Corp., in a talk on "Air Conditioning, 1954." He told the dealers Philco is "sick and tired" of price cutting and is quietly cleaning up such operation around the country. Otter specifically mentioned New

York City, Chicago, and Los Angeles as cities where clean-up activities have been undertaken.

### PREDICTS OUTPUT OF 1,200,000 ROOM COOLERS IN 1954

Otter predicted that 1,200,000 (and possibly more) room air conditioners would be manufactured this year and that close to that number would be sold. He said indications are that manufacturers will be more cautious on 1954 production. He urged the dealers to promote the room air conditioner vigorously but to be careful not to "go overboard" on buying.

Two new vice presidents—Don Gabbert of Gabbert's, Minneapolis, and Carl Hagstrom of General Appliance Co., San Francisco—were elected during the convention. H. B. Price, Jr. of Price's, Inc., Norfolk, Va., was re-elected a vice president.

Elected directors for three-year terms were Harold Rice of Good Housekeeping Shop, Dayton; Steve Feinstein of Magee's, Boston; and Hagstrom. Bourland, Price, and Al Robertson of Westinghouse Appliance Stores, Oklahoma City, were re-elected for three-year terms. Art Vyse of Suburban Appliances, Wilmette, Ill., was elected for a one-year term, replacing John F. Westley of Northern Supply Co., Milwaukee, who resigned.

### ATTENDANCE AT ALL-TIME HIGH

At the Monday breakfast session, retiring President Johnston reported that attendance at the convention set an all-time high for the association.

"This is due primarily to our new size," he said, "but it is also due to the retailer's determination to become a more dependable, contributory, productive, and profitable element in and of the industry."

"This year we are going to fight for our existence, for the justification of the dealer and the services he renders in the traditional sense of our industry, and for the erasure of that horrible blot on our record of having appliance and television dealers lead the 1953 parade of business failures."

He said dealers must build volume; improve their managerial capacities; keep better records; have stronger controls; "know what we have in stock when we buy; plan when, how, and at what price we're going to sell before the merchandise arrives in stock; and know and respect what it's going to cost us to sell that merchandise installed, demonstrated, and kept operative."

Johnston said he believed that an increasing number of manufacturers will recognize, during 1954, that they "must have regular authorized channels for distribution and confine their allocation of merchandise to those channels. . . . They must show care, set definite standards, and take deep pride in the selection of their dealers. And the dealers must respond with a fierce loyalty and a fighting determination to do a better job."

Johnston predicted that dealers who have sufficient financial and managerial strength to justify their being in the business "will show a healthier financial picture at the end of this year than you do at the beginning."

In addition to the talk by Farr, dealers attending the selling session Monday morning heard talks on hiring and training of salesmen, specialty selling by demonstration, and the value of women in retailing.

### 'SALESMAN OF THE YEAR' AWARD PLANNED

During the annual banquet Monday evening, it was announced that NARDA and the Ladies Home Journal will jointly present a retail "Salesman of the Year" award next year. A check for \$500, to be used for this purpose, was presented to the association by the publication.

At the Tuesday breakfast session, dealers heard reports of the manufacturer relations, service, and standardized bookkeeping committees.

Vergal Bourland, who has headed this committee, said the group was "pleased" with the results of meetings with a limited number of manufacturers in 1953 (General Electric, Motorola, Zenith, Kelvinator, and Maytag).

He said contacts with manufacturers probably would be doubled this year. (Following the convention, conferences were held with representatives of Admiral, G-E, Westinghouse, and Hotpoint). Wallace Johnston

was named head of this committee.

Hal Chase, Chase Television Service, Inc., Detroit, and chairman of the service committee, outlined a ten-point program set up this committee for 1954. Ken Stucky, Stucky Bros., Fort Wayne, Ind., urged that a standardized system of accounting be adopted throughout the appliance

industry. Both Chase and Stucky will continue to head these committees.

George Webster of John G. Webster & Sons, Washington, D. C., was named chairman of the costs-of-doing-business study committee, and Emerson Dole, The Appliance Center, Wichita, Kans., chairman of the membership committee.

## Mr. Dealer... IS YOUR PROSPECT Money Minded?



... then tell him about the

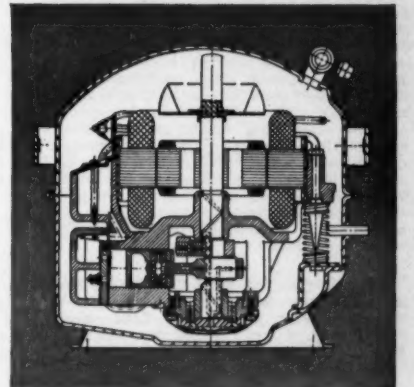
## THRIFTY Tecumseh HERMETICS

• Your prospect doesn't have to be a "Scotchman" to recognize the plus values he gets in a freezer unit equipped with a Tecumseh Hermetic.

• Facts like these: lower price, better performance, greater capacity and lasting dependability with lower operating cost, will convince the most "hard to sell" prospect.

• And you, as a dealer, can't go wrong when you know that 73% of all freezers sold are equipped with Tecumseh Hermetics... your assurance that they are overwhelmingly approved by the freezer industry.

• Why don't you get all the facts about the popular line of Tecumseh Hermetics and make your selling job easier.



REMEMBER THERE ARE OVER 14 MILLION TECUMSEH UNITS IN USE TODAY!

Send for this free booklet today, it tells all about the Tecumseh Hermetics. Write Dept. N-2.



TECUMSEH PRODUCTS  
TECUMSEH, MICH. Company

EXPORT DEPT.: 2111 WOODWARD AVE., DETROIT, MICH.

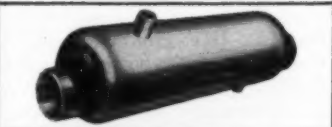
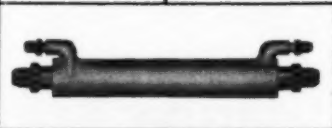
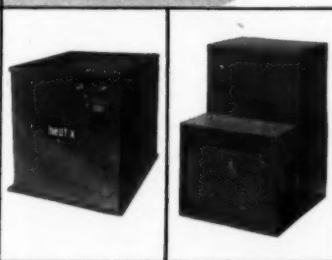
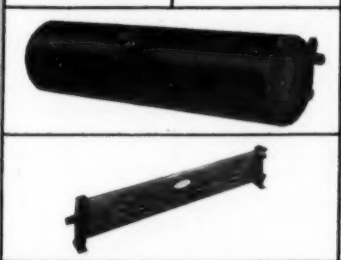
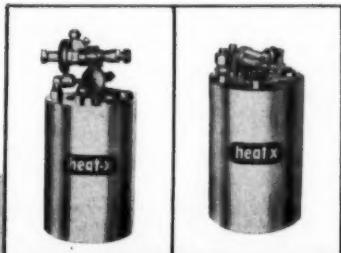


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Heat Transfer Products By

## heat-x

Heat-X products are engineered and manufactured by heat transfer specialists. High side or low side, they'll provide a better installation . . . insure trouble-free operation. Don't risk your reputation by settling for less than the best.



Cast aluminum liquid coolers that eliminate danger of freeze-up damage... heat interchangers of exclusive inner-fin construction for extra efficiency, low pressure drop... high capacity cooler compressor assemblies... combination air- and water-cooled condensers for tremendous water savings, flexible installation... these are a few of the Heat-X products — a line designed and built by heat transfer specialists with your needs in mind.

WRITE TODAY FOR FREE ILLUSTRATED BULLETINS.

THE HEAT-X-CHANGER CO., Inc.

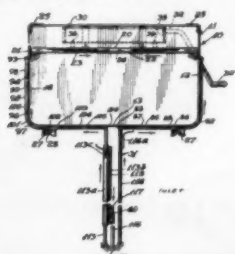
BREWSTER - NEW YORK



# PATENTS

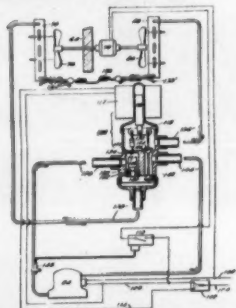
Week of October 6

**2,654,226. AUTOMATIC DEFROSTING EVAPORATOR.** Thomas W. Duncan and Albert C. Rosenkrantz, Evansville, Ind., assignors to Seeger Refrigerator Co., St. Paul, Minn., a corporation of Minnesota. Application Aug. 18, 1951, Serial No. 242,462. 7 Claims. (Cl. 62-3.)



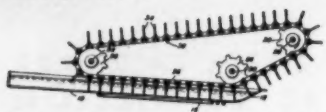
1. A defrosting evaporator comprising a metal housing having a pair of side walls joined by a bottom wall and provided with a shelf extending from side wall to side wall, a rear wall closing the rear space between said side walls, a suction header carried by an upper part of one wall and having a suction tube extending into the header with the tube inlet adjacent to the top of said header, sinuous tubing carried by the bottom of said shelf and extending sinusoidally down both side walls and across the bottom of said bottom wall, an inlet tube communicating with the sinuous tubing at a point remote from said header to cause the refrigerant to be supplied through two paths in parallel leading to said header, and outlets from said sinuous tubing communicating with both ends of the lower part of said header, said tubing also including a depending U-shaped portion having a pair of legs extending downward from said bottom wall, and an elongated metal enclosed electric heater engaging one of said legs and causing the heating and upward boiling of refrigerant in said latter leg, to circulate heated refrigerant through said tubing and header to defrost said evaporator.

**2,654,227. ROOM COOLING AND HEATING SYSTEM.** Glenn Maffly, Springfield, Ohio. Application Aug. 30, 1948, Serial No. 45,343. 21 Claims. (Cl. 62-3.)



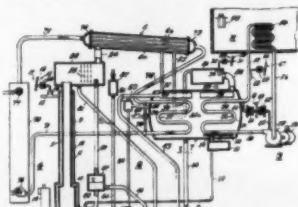
2. In a refrigerating system of the reversible type, a pair of heat exchange units including one which serves to dissipate heat and one which serves to pick up heat, a pressure imposing element adapted to circulate a volatile refrigerant through the system, means forming a pair of conduits each of which is connected with one of said heat exchange units, one of said conduits carrying warm high pressure refrigerant and the other carrying the low pressure vapor of said refrigerant, control means for reversing the operation of said system and thereby exchanging the functions of said heat exchangers and those of said conduits, an auxiliary motor associated with said system to operate a fluid circulating device, switch means for starting said motor, and temperature responsive means for actuating said switch, said temperature responsive means being actuated by a change of temperature related at one time to one of said conduits and at another time to the other of said conduits.

**2,654,228. DEVICE FOR FREEZING AND DISPENSING ICE CUBES.** Robert W. Templar, West Sacramento, Calif. Application Dec. 3, 1951, Serial No. 259,555. 4 Claims. (Cl. 62-4.)



1. An apparatus for freezing and dispensing ice cubes comprising a stationary horizontally disposed tray adapted to receive a freezable liquid, cooling means adjacent the tray for freezing the liquid therein, an endless conveyor having a lower flight overlying the tray, longitudinally spaced fingers carried by the conveyor, the fingers on the lower flight of said conveyor depending into said tray, whereby ice formed between adjacent fingers on said lower flight will be urged from the tray during rotation of said conveyor, and a timer mechanism operatively connected to said conveyor and the cooling means for moving the conveyor after defrosting of the cooling means.

2,654,229. CONTROL FOR ABSORPTION REFRIGERATION SYSTEMS. Harry C. Shagalloff and Philip A. Cooper, Evansville, Ind., assignors to Servel, Inc., New York, N. Y., a corporation of Delaware. Application June 30, 1951, Serial No. 234,522. 15 Claims. (Cl. 62-5.)



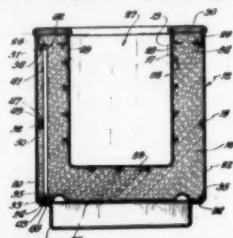
1. In an air conditioner, a vacuum type absorption refrigeration system utilizing water as a refrigerant and having an evaporator and absorber, an auxiliary cooling system for circulating a cooling medium in heat exchange with the evaporator and ambient to be cooled, a second auxiliary cooling system for flowing a cooling medium in heat exchange with the absorber, and control means for delaying operation of the refrigeration system until the evaporator is externally loaded by the flow of cooling medium in heat exchange therewith and delaying the operation of the second auxiliary cooling system to flow cooling medium in heat exchange with the absorber until the evaporator is internally loaded with refrigerant to prevent the refrigerant from freezing.

**2,654,230. EXPANSIBLE GRID FOR ICE TRAYS.** Richard M. Storer, Denver, Colo. Application June 6, 1949, Serial No. 97,335. 9 Claims. (Cl. 62-108.5.)



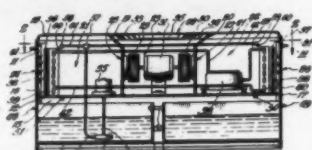
1. An ice tray grid, comprising a lengthwise wall member and a series of double-section cross wall members extending laterally from the lengthwise walls at spaced intervals along the same and defining a plurality of ice-block forming sections on opposite sides of the grid, said lengthwise member comprising a central portion, and an exterior covering section for opposite sides of said central portion in integral connection with the sections of the cross walls, a lever pivoted on said lengthwise member and having a link pivotally connected to said covering portions lengthwise of the grid, means for holding said covering portions in fixed relation to said central portion at a point adjacent the end of the grid remove from its lever-supporting end, and movement-arresting means carried on said central portion and connected with said covering portions for limiting the expansion movement of each ice block-forming section.

**2,654,231. REFRIGERATING COIL MOUNTING IN CABINET.** Robert L. Eichhorn, Evansville, Ind., assignor to International Harvester Co., a corporation of New Jersey. Application July 15, 1950, Serial No. 174,030. 7 Claims. (Cl. 62-115.)



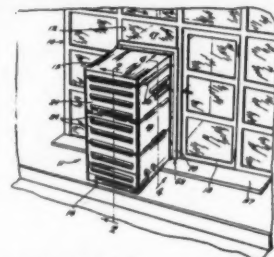
1. In a refrigerator cabinet, an inner liner spaced within an outer shell, a condenser coil disposed adjacent the inner walls of said outer shell, means for attaching said coil to an exposed wall of said outer shell, said means comprising a bracket and a retainer member and a clamp member, said bracket secured to an unexposed wall of said outer shell, said retainer member having a groove which fits over a portion of said coil, an end of said retainer member supported by said bracket, said clamp member having a central portion and two end portions, said central portion positioned against said retainer member with said end portions deflected toward said wall and secured to adjacent portions of said cabinet, said coil being secured between the retainer member and the exposed wall.

**2,654,232. AIR CONDITIONING APPARATUS.** Joseph A. Galassi, Evansville, Ind., assignor to International Harvester Co., a corporation of New Jersey. Application Aug. 5, 1950, Serial No. 177,919. 10 Claims. (Cl. 62-140.)



1. In an air conditioning unit for controlling the moisture content of air within an enclosure, refrigerant evaporating means, means for circulating part of the air into contact with said refrigerant evaporating means and part of the air into contact with said refrigerant condensing means, means for collecting the moisture which condenses from the air which passes over said refrigerant evaporating means, and means for spraying water over the surfaces of said refrigerant evaporating means and said refrigerant condensing means.

**2,654,233. AIR CONDITIONING UNIT FOR CASEMENT WINDOWS.** Dwight L. Shoemaker, Cincinnati, Ohio. Application May 31, 1951, Serial No. 229,043. 5 Claims. (Cl. 62-140.)

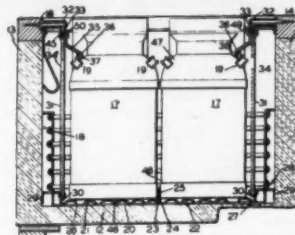


1. In a self-contained air conditioning unit to be mounted in a casement window the combination of a closed casing structure having a heightwise dimension substantially greater than its width, a vertical partition dividing the casing into a front and rear compartment, a horizontal partition disposed across the back portion of the rear compartment and dividing said compartment into an upper and a lower section communicating with each other forwardly of the said partition, a fan drive motor positioned in the lower section of the rear compartment and having one end of its rotor shaft extending through the vertical partition, an air outlet opening formed in the major portion of the front wall of the casing, a downwardly inclined, rearwardly extending plate in the front compartment forming with the casing side walls an air duct communicating with the said air outlet opening and terminating in an air inlet opening for a fan, a first fan disposed in said air inlet opening and secured to the said end of the fan rotor shaft, an evaporator disposed within the duct adjacent the opening in the front casing wall, an air intake opening formed in a side of the front compartment rearwardly of the duct, said air inlet opening for the fan being connected to said intake opening in the side of the compartment, a compressor and a condenser connected in the evaporator circuit, said compressor being mounted upon the horizontal partition and disposed within the upper section of the rear compartment, an air inlet opening formed in the rear wall of the casing and communicating with the upper section of the rear compartment, an air outlet opening formed in the rear wall of the housing and communicating with the lower section of the rear compartment, the condenser being disposed within the lower section adjacent said opening, a second fan mounted on the rear end of the said fan rotor shaft and disposed in front of the condenser, said fan being adapted to draw air through the first mentioned opening in the rear casing wall and across the compressor and to force said air through the condenser and out through the second mentioned opening in the rear casing wall.

**2,654,500. CAN SUBMERGING DEVICE FOR MILK COOLERS.** William H. Harstick, Oak Park, Ill., assignor to International Harvester Co., a corporation of New Jersey. Application Oct. 15, 1949, Serial No. 121,595. 4 Claims. (Cl. 220-15.)

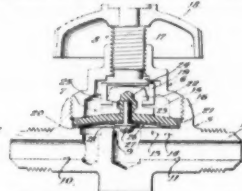
1. A milk cooler comprising a liquid-filled receptacle having a bottom, end walls, and side walls to receive a plurality of upright longitudinally spaced milk cans, said milk cans being of the type having an outwardly projecting handle; and means for retaining said cans in a substantially submerged and upright condition against the buoyant effect of the liquid when the cans are empty, said means comprising a longitudinally extending bumper rail positioned on said bottom between and substantially parallel to said side walls; means to support said bumper rail including a plurality of transversely extending, longitudinally spaced

bars, said bars having spacer elements at each end adapted to abut said side walls; a plurality of upright members having their lower ends connected to said spacer elements; means connecting the upper ends of said upright members to said side walls; supporting brackets connected to said upright members projecting downwardly and inwardly into the



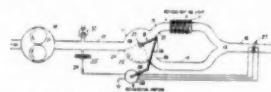
receptacle; a plurality of longitudinally extending rods connected to said brackets and disposed within the upper part of the receptacle, said rods being substantially parallel and having one of their ends terminating closely adjacent to an end wall of said receptacle, the other ends of said rods being longitudinally spaced from the opposite end wall a distance sufficient to provide an access area to allow the insertion or removal of said milk cans between said other ends of the rods and said opposite end wall to or from said receptacle beneath said rods, said milk cans being positionable within said receptacle in substantially parallel longitudinal lines with a lower portion of each can in abutment at one side with said bumper rail and the handle thereof extending from the opposite side beneath and in abutment with the adjacent rod and means to close said access area and maintain the milk cans contiguous to said area submerged within said receptacle comprising a member adapted to extend from each of said rods over and in abutment with a handle of an adjacent can closely adjacent to said opposite end wall.

**2,654,559. DIAPHRAGM VALVE.** George E. Franck, Riverside, Ill., assignor to The Imperial Brass Mfg. Co., a corporation of Illinois. Application March 2, 1950, Serial No. 148,360. 4 Claims. (Cl. 251-24.)



4. As an element of a valve, a diaphragm unit comprising a cap-like element having an axial recess opening only through one end thereof and the recess having intermediate its ends an annular groove, a first lamina composed of polyethylene having an axial projection cast into and filling the groove and said recess, said first lamina being flexible and providing a certain resistance to rupture, a second very thin lamina composed of polytetrafluoroethylene highly resistant to chemical action, said second lamina being substantially about one fourth as thick as the first lamina, a hole extending through said second lamina and into the axial projection of said first lamina and terminating within said projection, a screw self-threaded in said hole to expand said axial projection tightly within the recess in the cap-like element, and a washer of the same material as said second lamina interposed between the screw head and said second lamina to form a seal around the opening in said second lamina through which said screw projects.

**2,654,580. TEMPERATURE CONTROL OF AIR SUPPLY SYSTEMS.** George Edward Shaw, Toronto, Ont., Can., assignor to A. V. Roe Canada Ltd., Peel County, Ont., Can., a corporation. Application June 22, 1950, Serial No. 169,738. 6 Claims. (Cl. 257-3.)



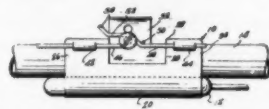
1. An air supply system comprising a compressor, a main conduit extending from the compressor to an outlet, a cooling element for cooling the air in said main conduit, a by-pass conduit bypassing the portion of the main conduit having the cooling element, the resistance to the flow of air offered by the by-pass conduit being substantially less than that offered by the by-passed portion of the main conduit whereby air will normally flow through the by-pass conduit, a combined selector and choke valve located in series in the main conduit intermediate the compressor and the cooling element, the said valve comprising a casing con-

taining a chamber having an inlet port and an outlet port from and to the main conduit respectively and a second outlet port to the inlet end of the by-pass conduit, shutter means pivotally mounted in the chamber and adapted variably and alternately in obstruct the said inlet port and the said second outlet port, and means for selectively operating said shutter means.

## CORRECTION

(Patent Number 2,650,404 was inadvertently omitted from the patents listed for the week of Sept. 1. It appears below.)

**2,650,404. ADJUSTABLE CLAMP.** Albert J. Dalpiaz, Dennison, Ohio. Application May 11, 1951, Serial No. 225,797. 5 Claims. (Cl. 24-243.)



1. An elongated U-shaped clamp comprising a bight, a pair of side sections projecting from said bight, one of said side sections having an opening extending inwardly from the free end intermediate the sides thereof, an arm arranged longitudinally of the other one of said sections and having one end secured to the free end of said other section, said arm being in alignment with said opening, anchoring means arranged in opposed relation with respect to said arm and supported on said one section for longitudinal sliding movement toward and away from said arm, and fastening means loosely and adjustably carried by said arm and positioned in said opening end engageable with the anchoring means.

## Burns Service Department Moving to Larger Quarters

PHILADELPHIA—The parts and service department of Judson C. Burns, Crosley-Bendix distributor, is being moved to larger quarters in a one-story, 28,000-sq. ft. building at 1714 Croskey St., according to Charles J. Goodman, assistant to the president.

The structure has been modernized at a cost of \$30,000.

Since the company's appointment as local Bendix distributor, the service staff has been expanded to 75 persons and 20 more will be added in the future, it was reported by Les Hoff, general service manager. He said 30 of the 75 work inside rebuilding and repairing appliances, and 45 are outside men.

The company delivers, installs, and services appliances for its dealers who do not have their own service department.

## Berman In New Quarters

BOSTON—E. A. Berman Co., contractor, engineer, and manufacturer of air conditioning, ventilating systems, and sheet metal products, has announced the removal of its offices to new and larger quarters at 23 Wormwood St. here.

**JOHN T. EVERETT & CO.**  
MEMPHIS 1, TENNESSEE

Manufacturers' Sales Representatives

Representatives and Warehouses in Principal Southern Cities

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1-18-54

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6 1/2" x 5 1/2" x 1/2" (Columbus 1, Ohio)

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**Ranco Inc.**

COLUMBUS 1, OHIO

WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS





## Government Contracts

### PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal.

### DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Officer in Charge, Navy Purchasing Office, Washington, D. C.	1	7306-S	11 Feb 54

Control panel portable, 6 in. x 12 in. x 12 in. arc welding and magnetic particle inspection for use with DC motor generator arc welding sets stationed aboard repair ships control unit shall include the following: water and gas control valves remote switch push-button control for automatic timing for pre-flow of gas and cooling water and separate portable water cooler, weights of water cooler and panel shall not exceed 100 lbs. each.

Warner Robins Air Materiel Area, Robins Air Force Base, Georgia—Attn: Director, Procurement & Production

Invitation for Bid (B) and Requests for Proposal (Q) are distributed to firms listed in the Air Force Bidders List. There are available with specifications and drawings at the nearest Air Force District or Sub-District Office for EXAMINATION ONLY by prospective bidders, pending their inclusion in the Bidders List. Bidders may apply at the nearest Air Force District or Sub-District Office for placement in the Air Force Bidders

List; also for procurement assistance and suggestions upon obtaining subcontracts.

Air Force District and Sub-District Offices are located in the following cities:

Atlanta, Ga.	780 W. Peachtree St., N.W.	Los Angeles 54, Calif.	155 W. Washington Blvd.
Boston, Mass.	14 Court Square	Box 2642, Terminal Annex	
Chicago 6, Ill.	165 N. Canal St.	Milwaukee 2, Wis.	770 N. Plankinton Ave.
Cincinnati 2, Ohio	(Sub-District)	Newark, N. J.	218 Market St.
3rd Floor		New York 3, N. Y.	John W. Wamsamaker Bldg.
Big Four Railroad Bldg.		780 Broadway	
Clayton 5, Mo.	8008 Carondelet Ave.	Oakland 12, Calif.	5th Floor, Jurgens Corder Bldg.
Cleveland 13, Ohio	3rd Floor, Watson Bldg.	1515 Clay St.	
1279 W. Third St.		Omaha, Nebr. (Sub-District)	Bldg. "D", Offutt Air Force Base
Dallas 1, Texas	1407 Ross Ave.	Philadelphia 2, Pa.	1411 Walnut St.
P.O. Box 866		Rochester 3, N. Y.	20 Symington Place
Dayton 2, Ohio	3rd Floor, Knott Bldg.	P.O. Box 1669	
4th & Main Sts.		Salt Lake City, Utah (Sub-District)	222 South West Temple St.
Detroit 32, Mich.	W. Warren Ave. & Longo Blvd.	San Diego 12, Calif.	3165 Pacific Highway
Hartford, Conn. (Sub-District)	500 Capitol Ave.	P.O. Box 1950	
Indianapolis 6, Ind.	7th Floor, Test Bldg.	Seattle 14, Wash. (Sub-District)	e/o Boeing Airplane Co., DPC Bldg.
54 Monument Circle		Phoenix, Ariz. (Sub-District)	359 N. First Ave.
Kansas City, Kans. (Sub-District)	2601 Walnut St.	Wichita 1, Kansas	449 N. Oliver St.
		P.O. Box 1941	

Oven, electric, 600° F., in a/w purchase description  
Oven, electric, 500° F., in a/w purchase description  
Oven, electric, 500° F., in a/w purchase description

41 ea.	1031Q	25 Jan 54
	Prime Class	
28 ea.	1031Q	25 Jan 54
	Prime Class	
12 ea.	1031Q	25 Jan 54
	Prime Class	

### Admiral Establishes Denver, Grand Rapids Branches

CHICAGO—Admiral Corp. has established factory branches in Denver and Grand Rapids, Mich. to handle the sales and service of the company's radio, television, and appliance lines in those localities, Clarence Tay, general manager of branches, announced recently.

Admiral Distributors, Inc., Denver division, will be located at 1140 W. 5th Ave. William Hand, a veteran in

the appliance business, has been named general manager. Arthur Kitto is supervisor in charge of appliance sales.

Ralph Dikeman, formerly general manager of Wolverine Appliance Distributors in Grand Rapids, has been named general manager of Admiral Distributors, Inc., Grand Rapids division, which is located at 920 Monroe, N.W.

### Herbert Hansen Dies

CHICAGO—Herbert Hansen, president of Refrigerating Specialties Co. here, died recently in West Suburban hospital. He was 60.

Surviving the Chicago executive are his widow, Bernice W., and three daughters.

### GM Styling Section Now Handles Frigidaire Lines

DAYTON—Frigidaire products now are being styled by the General Motors styling section in Detroit, according to Mason Roberts, GM vice president and Frigidaire general manager.

The GM styling section, in addition to serving as the central design staff for five automobile divisions, also is responsible for the design of numerous other GM products and exhibits. These range from streamlined trains to the spectacular Motorama show which opens in New York, Jan. 21.

Harley J. Earl, GM vice president, has been in charge of the styling staff since the section was formed in 1927.

Working with Frigidaire engineers and home economists, Earl developed the "Kitchen of Tomorrow" which will be one of the features of the Motorama this year.

### Gustin-Bacon Names Crone New York Div. Manager

KANSAS CITY, Mo.—Gustin-Bacon Mfg. Co. here announces the appointment of K. H. Crone as division manager of the company's New York sales offices.

Crone has been associated with Gustin-Bacon since 1946, and leaves his post as assistant Chicago division manager to assume his new duties in greater New York area. He will be responsible for the sale of the company's glass fiber insulations and other products.

### Drumm To Leave Gibson, Join Advertising Agency

GRAND RAPIDS, Mich.—Gregory V. Drumm, manager of advertising and sales promotion of the Gibson Refrigerator Co., will join Wallace-Lindeman, Inc., Grand Rapids advertising agency, in February as vice president and member of the firm, Oliver A. Wallace, president, has announced.

For the past several years Drumm has been in charge of all Gibson advertising and promotion activities. He set up the concern's market development department and directed manufacturing and marketing surveys.

During World War II, Drumm handled Gibson's subcontract work on gliders made by the company for the Air Force.

Recently, he served in Detroit as special sales representative in Detroit for Gibson's defense production operation.

Before joining Gibson in 1939, Drumm was a newspaper reporter, public relations executive, and had experience in advertising and selling work.

### Quicfrez Names Outlets In Ohio and Delaware

FOND DU LAC, Wis.—Two new distributors — D & M Distributors, Wauseon, Ohio, and Peninsula Electric Supply, Dover, Del.—have been appointed by Quicfrez, Inc. here, according to Harry Ryan, vice president and general sales manager for the manufacturer.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

MAN 32 YEARS old with 10 years' experience refrigeration, air conditioning sales and service in commercial and domestic equipment; also some TV experience. Married, willing to travel or relocate. Served 2 years in U. S. Navy as refrigeration serviceman. BOX 4481, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVES—Wide acquaintance with distributors, dealers, and contractors in Missouri, Illinois, Kentucky, and Arkansas. Additional air conditioning and refrigeration equipment lines desired. Especially interested in compressors and condensing units; also packaged air conditioning units. Coverage by men with long experience in the field. BOX 4482, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

FACTORY REPRESENTATIVES wanted, to sell nationally advertised Freez-King line of soft ice cream freezers and malt and shake dispensers. Territories available in Mississippi, Alabama, Georgia; also entire Pacific coast. Present line must be non-conflicting. Liberal commission. State full details. FREEZ-KING CORPORATION, 2518 West Montrose, Chicago 18, Illinois.

PROFIT FROM your commercial refrigeration contacts! Territories in east and middle west being opened for complete Schmidt line of refrigerated equipment—meat, grocery, bakery, floral, and institutional. Representatives will be appointed to contact dealers in these areas. Excellent opportunities. THE C. SCHMIDT COMPANY, 1712 John Street, Cincinnati 14, Ohio.

SALES ENGINEER, air conditioning. A large Midwest Carrier distributor has opening for young man of proven sales ability. Must be capable of engineering, estimating, and selling jobs up to 25 tons. This is an exceptional opportunity to locate with an old and well-established firm offering a profitable and attractive future. Age, 25 to 35. Write giving full particulars of past experience and qualifications. All replies confidential. Write BOX 4475, Air Conditioning & Refrigeration News.

SALESMAN, ONE who has experience in the sale of a complete line of fixtures for butchers, wholesale butchers, etc. Attractive salary and commission arrangement. Permanent job with well-known factor in the fixture industry. Write, giving full details of past experience and salary expected, to BOX 4477, Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVES: Major manufacturer of complete line of commercial beverage cooling equipment, including cafeteria water coolers, draft beer dispensers, ice cream mix and milk storage cabinets, and a broad line of bottle coolers to fit any type installation (school and institutional cafeterias, hotels, restaurants, and taverns); also a line of bottle

coolers for the carbonated beverage industry, has openings in several southern, southwestern, and western areas, for factory representatives or agents, now calling on hotel supply houses and refrigeration accounts. Reply should indicate territory now covered and lines represented. Submit resume of personal and business qualifications to: BOX 4483, Air Conditioning & Refrigeration News.

SALES ENGINEER wanted. Must be a resident of central North Carolina and be able to travel three states, calling on architects, engineers, dealers, and distributors of commercial refrigeration and air conditioning. Should know principles of refrigeration but need not be an engineer. Should be mature enough to have explicit confidence in his own ability as a good salesman. Give complete personal and business history, including present employer, and some idea of present earnings. All of our employees have been advised of this advertisement. BOX 4484, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

BRAND-NEW GENERAL Electric and Copeland twin cylinder bodies with fly-wheel and service valves— $\frac{1}{2}$  hp., only \$42.00. 1 hp., \$47.00 (10% discount in lots of 6). Latest model General Electric fan-cooled hermetic units,  $\frac{1}{2}$  hp., \$34.00;  $\frac{3}{4}$  hp., \$37.00. Home refrigeration kits, consisting of  $\frac{1}{2}$  hp. Tecumseh unit, evaporator and capillary, completely assembled and factory-tested, only \$40.00. All equipment new and factory-guaranteed. MANN REFRIGERATION SUPPLY COMPANY, 440 Lafayette Street, New York City; or phone GRamercy 3-8000.

ATTENTION SERVICEMEN: Send for our refrigeration parts and supplies catalog. Save up to 50% on many items. Relays, V belts, T.X. valves, fittings, controls, driers. New-guaranteed merchandise. WALTER W. STARR REFRIGERATION, 2833 Lincoln Avenue, Chicago 13, Illinois.

ATTENTION: DISTRIBUTORS and dealers only—open type condensing units, 1 hp. to 3 hp., being sold directly from factory at prices under manufacturing cost. Unusual opportunity to purchase high quality, overstocked units from major manufacturer. BOX 4478, Air Conditioning & Refrigeration News.

COLLECTION METERS for sale—new and used. Available in quantity, at greatly reduced prices. BOX 4479, Air Conditioning & Refrigeration News.

### BUSINESS OPPORTUNITIES

COMMERCIAL REFRIGERATION and air conditioning business in uptown New York City. Sales and service. Well-established and enjoying a good reputation. Also manufacturers of walk-in coolers. Owner seeking retirement. For further information, write to BOX 4485, Air Conditioning & Refrigeration News.

### MISCELLANEOUS

I WOULD like to hear from manufacturers of room air conditioners who want a reliable and efficient service company to reoperate their defective units. My background experience includes seventeen years with one of the largest manufacturers of this product. Write BAUMANN REFRIGERATION SERVICE, 1528 Jefferson Avenue, Buffalo 8, New York.



## New 1954 Chevrolet Trucks

**New Power! New Economy! New Features you want!**

New Chevrolet trucks for '54 are here to do your hauling or delivery job faster, more efficiently and more economically.

To begin with, they bring you thrifty new power in all models. You save time on every trip with extra reserves of high-compression horsepower under the hood—and you enjoy greatly increased operating economy as well.

In addition, these great new Chevrolet trucks offer new and even greater dependability with increased ruggedness throughout the chassis. You'll find heavier axle shafts in 2-ton models... bigger, more durable clutches in light- and heavy-duty models... more rigid frames in all models. Pickup and stake bodies are plenty rugged, too—and they're roomier for '54!

But that's only the beginning! You enjoy new cab comfort, convenience and safety. Instruments are easier to read... controls are easier to reach. A new one-piece curved windshield gives you greater visibility. The new Ride Control Seat\* lets you drive in relaxed comfort hour after hour, over all kinds of roads. Seat cushion and back move as a unit to "float" you over bumps without back-rubbing.

In another great advance, new Chevrolet trucks offer you the last word in no-shift driving ease and convenience. With proved truck Hydra-Matic transmission\* you can drive all day and make door-to-door deliveries without shifting or clutching. Fact is, there is no clutch!

These are some of the many big new benefits awaiting you in the new Chevrolet trucks for '54. Why not plan to get the whole money-saving story at your Chevrolet dealer's soon!... Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!



ADVANCE-DESIGN TRUCKS

### CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine\* for extra heavy hauling. The "Thrifty-master 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. NEW TRUCK HYDRA-MATIC TRANSMISSION\*—offered on  $\frac{1}{2}$ -,  $\frac{3}{4}$ - and 1-ton models. Heavy-Duty SYNCHRO-MESH TRANSMISSION—for fast, smooth shifting. DIAPHRAGM SPRING CLUTCH—improved-action engagement. HYPOID REAR AXLE—for longer life on all models. TORQUE-ACTION BRAKES—on all wheels on light- and medium-duty models. TWIN-ACTION REAR WHEEL BRAKES—on heavy-duty models. DUAL-SHOE PARKING BRAKE—greater holding ability on heavy-duty models. NEW RIDE CONTROL SEAT\*—eliminates back-rubbing. NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES—give increased load space. COMFORTMASTER CAB—offers greater comfort, convenience and safety. PANORAMIC WINDSHIELD—for increased driver vision. WIDE-BASE WHEELS—for increased tire mileage. BALL-GEAR STEERING—easier, safer handling. ADVANCE-DESIGN STYLING—rugged, handsome appearance. \*Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models, truck Hydra-Matic transmission on  $\frac{1}{2}$ -,  $\frac{3}{4}$ - and 1-ton models.

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!





HORIZONTAL PLASTIC DOORS roll apart at the touch of a button for easy access to this built-in food freezer in Frigidaire's experimental "Kitchen of Tomorrow." A matching cabinet on an adjacent wall contains a horizontal refrigerator, while a third appliance provides ice cubes, crushed ice, and cold water.



REFRIGERATOR AND food freezer, in cabinets with horizontal doors, can be seen on both walls at far end of kitchen. Cooking center is opposite island sink; dinette in foreground.

## Frigidaire 'Dream Kitchen' --

(Concluded from Page 1, Column 4) one's hand being sufficient to activate the switch.

A new household appliance automatically provides a supply of cold water, ice cubes, and crushed ice.

Refrigerator and food freezer are two matching appliances, each horizontal and at convenient waist height. Vertically sliding doors are push-button operated on both units.

The freezer has a new type frozen juice can dispenser; the refrigerator has a special egg dispenser. Both appliances incorporate new refrigeration techniques and space-saving insulation.

All kitchen cabinet doors have spring-loaded, touch latches, eliminating knobs and handles. The doors pop open with slight pressure on the front panel.

A photographic viewer makes it possible for the homemaker to visualize menus and recipes.

The double sink is an island in the kitchen. It is accessible from either side, has a knee hole for sit-down work, and is equipped with a dishwasher and garbage disposal unit.

A special valve on the sink makes it possible to control both water temperature and flow with a single faucet. The temperature of the water being delivered is indicated by means of an illuminated color dial. The drain is electrically controlled.

Ingredients needed in the mixing center are enclosed in a wall cabinet, moving down to the point of usage at the touch of a button. The flour dispenser has a motor-driven sifter.

When not in use, the food mixer and blender disappear into the table top by pushbutton control.

Two ovens rise from counter level

to handy waist height at the press of a button. Both have full-size glass doors which slide, taking less room.

A special feature of one of the ovens is a device which passes charcoal or hickory smoke through the oven, giving the meat the desired flavor. There also is a removable rotisserie.

The other oven is a simulated electronic oven which will cook bacon in a matter of seconds, bake potatoes in about five minutes, and cook a family turkey in 45 minutes.

Built into the stainless steel range top are a four-slice toaster, a unique combination Dutch oven and griddle, and a "Thermizer" well cooker.

These, and numerous other features, are much more than mere "dreams," according to Mason Roberts, GM vice president and Frigidaire general manager. With the single exception of the electronic oven, everything in the kitchen is operational now.

"Some of the unusual features could be available to the public very shortly, while it may take years before others, if popularly accepted, can be manufactured on a mass production basis," he said.

In the case of the electronic oven, Roberts explained that such high-speed ovens for home use still are in the laboratory stage, but that indications are they may have considerable possibility for the future. Some electronic ovens are in limited use today for certain applications, he said.

"Living room" colors are used freely in the kitchen, including walnut, brown, and white, with accents of bright primary colors. There is generous use of aluminum, brushed stainless steel, plastics, and wood.

The ceiling, slightly arched, is acoustically treated, and the floor is vinyl covered cork over a very thin layer of foam rubber.

Associated with the kitchen work area is a large relaxation space with lounge, fireplace, desk, bookcase, telephone, and television. A buffet serving counter is the only divider between the kitchen and a beautiful dining area, further exemplifying the principle of the "open kitchen."

The kitchen also will be on display when the Motorama appears in Miami, Fla., Feb. 6-14; Los Angeles, March 6-14; and San Francisco, March 27-April 4.

## Freezer Sales--

(Concluded from Page 1, Column 2) freezers, expects the company to increase production in 1954 by 30 to 40% over 1953, which was the biggest year in its history.

Foerstner said that Amana is back-ordered on all three new models of home freezers which it introduced, and that deliveries at present are on allocation. He also said that the company is holding three times as many unfilled orders today as it did at this time last year. Stocks in the hands of distributors at the end of 1953, Foerstner said, were only half of what they had been at the end of 1952.

"Best reports indicate that about 1,250,000 freezers were sold in 1953," said the Amana executive. "We estimate that this figure will rise to about 1,400,000 in 1954. This means that American homes have added about 17 million cubic feet of new freezer space during the year," he continued.

"The freezer is bringing about a revolution in food buying habits in this country. With upwards of 60 million cubic feet of freezer space available in American homes, American families are buying in quantity more than \$2½ billion worth of frozen food for storage in the home freezer."

Foerstner said that the trend to upright freezers is continuing, and that homeowners are also buying larger and larger models. Despite the steadily increasing popularity of the larger uprights, Foerstner said that 30% of all Amana freezers sold were installed in kitchens of the homes.



## Westinghouse Promotions

RECENTLY PROMOTED TO NEW EXECUTIVE SALES AND ADVERTISING POSITIONS on Westinghouse refrigeration and major appliance products are these men, photographed while attending the Winter Market at Chicago. L. to r.: J. R. Clemens, advertising manager for major appliances; Jack Lee,



W. B. Creech



Reese Mills

merchandising manager for laundry equipment; S. J. Stephenson, manager of household refrigeration; George Meilinger, major appliance sales manager; R. M. Fichter, sales manager for refrigeration specialties; H. R. Cummins, advertising manager for refrigeration specialties. W. B. Creech has been appointed assistant division manager of the Electric Appliance Div., and Reese Mills is assistant general manager of the Electric Appliance Div.



# Considering aluminum tube for refrigeration?

Where aluminum tube can be used for refrigeration—such as in suction lines and capillary tubing—you'll find that Wolverine can fill the bill exactly.

Because it is manufactured under rigid quality control measures, you'll find that each piece is completely uniform, mirror smooth, and has stand-up stamina for tough applications.

In many cases, Wolverine copper refrigeration tube must be used. It's an accepted fact that it's been an industry standard for years and years and years.

Remember: Wolverine is ready to supply you with aluminum or copper refrigeration tube—plain, finned, or fabricated into the special tubular shape as specified by you. Write today for Wolverine's handy Statement of Scope.

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Manufacturers of Quality-Controlled Tubing  
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